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AGRICULTURE

No. 137

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CHINA REPORT

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I. GENERAL INFORMATION

EXPERIMENTS WITH IMPROVED RICE SEEDS IN SOUTH CHINA YIELD RESULTS

Beijing RENMIN RIBAO in Chinese 24 Feb 81 p 3

[Article by Correspondent Tu Zhengfeng [1458 2973 1496]: "Integrated Regional Cooperation in Experiments on South China Superior Rice Varieties Bears Rich Fruits"]

> **[Text] With the support of the Chinese Academy of Agricultural Sciences, South China rice breeding scientists have in recent years organized regional experiments and joint cooperation, which has resulted in 24 superior varieties of early rice, medium late xian and medium late geng that have consistently high yields, broad adaptability, and quite great utilization value.**

Since 1973, scientists involved in integrated regional cooperation in experiments on South China superior rice varieties have wideranginly explored breeding for plant shapes, breeding for resistance to diseases, and distant hybridization, selectively breeding 156 varieties of early rice, medium late xian, and medium late geng in rice growing areas under different conditions of soil, climate and varieties. These varieties have been recommended by the academies of agriculture of 15 provinces or regions including Guangdong, Zhejiang, Sichuan, Hunan, Jiangsu, Hubei, Shanghai, Jiangxi, Fujian, Guangxi, Anhui, Yunnan, Guizhou, Shaanxi, and Henan, as well as by some prefectural agricultural institutes. Following rigorous regional testing, 24 of the varieties have been designated as superior varieties for promotion throughout the rice growing region.

The output potential of these varieties has been substantially increased over that of the seeds of the 1950's and 1960's. In comparative experiments conducted under different conditions in the rice growing region net increases in output as a result of the varieties themselves averaged 40 to 50 jin per mu. For example, the superior variety early rice "Guangluai No 4," evaluated in 1974 regional experiments, beat out China's first short stemmed superior variety of the 1960's, "Aijiaonantehao," and the area planted to it jumped to 101 million mu. In recent years continuous regional experiments evaluated a group of varieties as possessing qualities of greater increased yields and more consistent yields than "Guangluai No 4." They were Hunan's "Xiangaizao No 9," Sichuan's "Hunanzao No 1," and "Hunan No 2," Zhejiang's "Junxie," and Jiangxi's "51810." These have already become the major superior varieties being promoted currently in all the southern provinces, replacing wide area growing of "Aijiaonantehao," "Nanjing No 11," "Hushuang 1011," and "Guichao No 2." Following regional experiments and recommendation in the south, they have been rapidly promoted everywhere in the south. In addition, Hubei's "Ewan No 3," 'Ewan No 5," and "Wangeng 105", Jiangxi's "Nangeng No 33," "Nangeng No 34," and Gannanwan 13," and Hunan's "Dongtingwanxian" are all superior mainstay varieties of late xian and late geng that have increased output for many years.

The integrated regional experiments in 15 southern provinces and regions built and strengthened a corps of rice breeding scientists and technicians. Numerous oil rice breeding experts and teachers went down to the grassroots for field experiments where they taught by personal example as well as personal instruction, thereby improving the theoretical levels and the ability to solve practical problems of a large number of specialized scientists and technicians. The experiments also fostered numerous capable rice breeders and planters among the peasant masses.

Once southern superior rice varieties had been bred to have short stems, rice breeding scientists explored the direction, the methods, and the course of southern rice breeding, proposing the fostering of technical measures for superior varieties with a heterosis of "bumper (output), early (ripening), resistanct (to disease), and superior (quality)" in order to meet improvements and developments in the farming system and constant changes in bioecological conditions.

9432
CSO: 4007/276

NATIONAL

ECONOMIC RESULTS STRESSED FOR STATE FARMS

Beijing ZHONGGUO NONGKEN [CHINESE AGRICULTURAL RECLAMATION] in Chinese No 10, 24 Oct 80 pp 7-10

[Article by Ding Lushu [0002 1462 2873] "Improving Economic Results Is an Important Current Problem in the Operation of State Farms"]

[Excerpts] A comparison of the production management results of the national state farms and farmland reclamation enterprises for 1979 with those for 1976 shows that the gross output value increased 41.1 percent; gross output for grain and legumes increased 20.5 percent; and a deficit of 720 million yuan was changed to a profit of 520 million yuan, which changed a serious deficit situation of several consecutive years. The facts prove that running state farms in accordance with socialist economic principles, emphasizing economic results, is the key to successful operation of the state farms.

Although in recent years there has been a very great increase in the economic effects of state farms, the potential is even greater. Great effort must still be made before the ideological effects of not stressing economic results and the problems existing in the actual work can be solved. From the following analysis, which is made viewing the main economic results of 1979 for representative provinces (areas) with relatively numerous agricultural and cattle farms as an example, and from the aspects of labor use and labor consumption, the existing problems can be seen:

1. A Look at Economic Results from the Aspect of Labor Use

The gross output value of each 100 yuan of fixed assets for state farms and farmland reclamation enterprises was 85.1 yuan. This figure for the highest province (area) was 171.7 yuan, which is 101.8 percent higher than the national average. The figure for the lowest province (area) is only 21.7 yuan, which is only 25.5 percent of the national average. There is a difference of seven times between the highest and lowest figures. On some farms each 100 yuan in fixed assets produces over 300 yuan in output value, and on some it only produces some 10-odd yuan in output value, a 30 fold difference between the high and the low.

The profit for each 100 yuan in state farm and farmland reclamation funds (including fixed investment assets and current assets) was 4.17 yuan. This figure for the highest province (area) was 16.8 yuan, which was three times the national average, while the lowest province (area) was not only no profit but a loss of 3.9 yuan. The profit for each 100 yuan of assets for some state farms was over 100 yuan while some had losses greater than 80 yuan.

2. A Look at Economic Results from the Aspect of Labor Consumption

The output value for each 100 yuan for state farms and farmland reclamation enterprises was a profit of 6 yuan. This figure for the highest province (area) was 16.2 yuan, 1.7 times the national average. There were eight provinces (areas) for which there was not only no profit but a loss, and for some the loss was 277 yuan for each 100 yuan in output value. The profit per 100 yuan of output value for some state farms was more than 70 yuan while the loss for some farms was more than 300 yuan.

The total national labor productivity for state farms and farmland reclamation enterprises was 1,859 yuan. The highest for provinces (areas) which primarily produce agricultural and cattle products was 2,310 yuan, 24.3 percent higher than the national average. There was a 3.73 fold difference between the highest and the lowest. There were some farms for which the total labor productivity was 5,500 yuan, while some had only about 200 yuan.

The difference between the highest and lowest production costs was also very great. For wheat, as an example, the lowest per mu average cost was only approximately 30 yuan with a per mu production of 300 jin. The cost profit ratio was thus over 50 percent. The per mu cost for some wheat was more than 150 yuan with production being 700 jin per mu, showing a very great loss.

3. Analysis of Economic Results by the Profit and Loss Condition of State Farms and Farmland Reclamation Enterprises

Of the 2,237 state farms and farmland reclamation enterprises all over the country, 1,312 made a profit, showing a total profit of 874.9 million yuan. This is an average profit of 670,000 yuan for each enterprise. There were 925 enterprises showing a loss. The total loss amounted to 442.16 million yuan, an average loss of 480,000 yuan per enterprise. The amount of loss for some state farms was greater than the total amount of wages.

Industrial enterprises are generally considered profitable. However, according to analysis of 223 relatively large-scale industrial enterprises, 159 showed a profit totaling 108.31 million yuan for an average profit of 690,000 yuan. There were 64 such enterprises which showed a loss totaling 23.44 million yuan, for an average loss of 370,000 yuan.

It is normal for highs and lows to exist in the economic results among the various state farms and farmland reclamation enterprises in various provinces (areas). However, when the differences in productive forces and management content are not too great, and the difference in economic results is several times or more than tenfold, it shows that the problem of many state farms and farm reclamation enterprises not stressing economic results is extremely serious. There is very great potential to improve economic results. Thus, improving economic results is a very acute current problem in the proper management of state farms.

Some state farms and farmland reclamation districts initially brought into play the superior natural conditions and natural resources of their areas, and the economic results then showed an increase. For example, the Heilongjiang farmland reclamation district brought into play the superiority of mechanized cultivation of large areas. It requires little investment, costs are low, and the earnings are large. By 1979, agricultural mechanization investment totaled an average of 25.70 yuan per mu, per mu costs for grain legumes was 27.70 yuan with a per mu profit of 9.20 yuan. The cost/profit ratio reached 33.2 percent. In 1 year more than 2.7 billion jin of marketable grain was handed over to higher authorities, and the grain and legume profit was more than 241 million yuan. Guangdong and Yunan farmland reclamation districts brought into play the superior natural conditions of a subtropical zone and developed rubber. State farms of Xinjiang, Hubei, and Jiangsu brought into play the superior natural conditions of those areas and developed cotton. State farms of Hunan planted sugar cane, and after refining sugar through comprehensive utilization of the cane waste, manufactured paper, fiberboard, and the like, all of which obtained excellent economic results. The cost/profit ratios in general reached 40-80 percent. Some state farms with disadvantageous natural conditions sought some superiority out of the disadvantage and through full utilization and development were also able to obtain excellent economic results.

Beginning in September 1978, the state farms of Chongiang began setting up integrated agricultural, industrial, and commercial complexes. Out of the economic alliances among the state farms, collective economic alliances with the communes and brigades developed. After more than a year, the economic results were greated improved. The nation, the enterprises, the communes and brigades, and the workers all experienced an increase in income. They turned loss into profit in 1978. A comparison of the years 1979 and 1977 shows that the taxes turned over to the nation increased from 700,000 yuan to 1.25 million yuan; a loss of 1.46 million yuan was turned into a profit of 1.7 million yuan; and in addition to an increase in average monthly wages from 45 yuan to 53 yuan, income for workers also was allocated a yearly bonus of an average of 74 yuan per person.

The relatively large amount of basic construction funds used for state farm agricultural machinery and equipment is an important portion of labor consumption. Increasing the utilization of agricultural machinery is an important point in increasing economic results. Actual experiences of several farms prove that using different agricultural machinery and equipment makes a very great difference in the economic results. For example, two production brigades of the Heilongjiang farmland reclamation district made mechanization and specialization tests. The Youyi state farm, two teams and 5 fen of land, used a complete set of imported American agricultural machinery and equipment. The Xunke state farm, nine teams and 1 fen of land, selected excellent agricultural machinery primarily domestically produced; there was only a combine which was imported from abroad. A comparison of the economic results for these two brigades for 1979 shows that for economic results in the aspect of labor utilization, the former brigade had agricultural machinery investments of 166 yuan per mu and each 10,000 yuan of agricultural machinery produced 25,400 jin of grain, while the latter brigade had 32.3 yuan investment per mu and each 10,000 yuan of machinery produced 141,000 jin of grain; from the aspect of labor consumption, the former brigade's profit output value per 100 yuan was 22.6 yuan while the latter's was 60.6 yuan. The per worker production of grain and legumes for the former brigade was 438,000 jin and for the latter was 132,000 jin. In the comparison of these two brigades, the former is 2.3 times higher in labor productivity; however, the former's per mu agricultural machinery investment if 4.1 times more than that of the latter. In grain produced per 10,000 yuan of machinery and per 100 yuan of output value profit, the latter brigade is higher than the former by 4.5 times and 1.7 times, respectively. From the standpoint of improvement in economic results, the former's potential is much greater.

In light of the aforementioned conditions, setting out from the actual conditions in our nation is necessary in order to bring about agricultural modernization. We must actively select advanced machinery and equipment, use modern scientific and technical equipment, swiftly improve the agricultural modernization level, and enthusiastically give attention to using as little capital as possible to obtain the finest economic results in all aspects. This will, on the basis of summation of experience and learning, provide several cases to carry out analytic comparison and gradually assess each economic result as it applies to the use of basic construction capital.

In recent years, the Dawa farmland reclamation district in Liaoning Province has set hourly wages at 20 percent of basic wages and the remaining reward is based on economic success, which arouses the enthusiasm of the broad masses. In 1979, the 550,000 mu of cultivated land throughout the district had an average per mu grain production exceeding 1,000 jin, to as much as 1,018 jin. Commercial grain totaling 270 million jin was handed over to higher authorities, and agricultural profit was 22 million yuan. The average income of the workers also increased 27 percent.

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NEW GENG RICE VARIETIES--Zhongdan Nos 1, 2, and 3 are new varieties of geng rice cooperatively bred by the Crop Institute of the Chinese Academy of Agricultural Sciences and the Dandong Municipal Institute of Agriculture in Lianning Province. Their common characteristics are: compactly shaped plants and delicate stems in the seedling, tillering, jointing, and heading stages; good change of color in the late season with green stems, yellow heads, and simultaneous ripening; superior quality polished rice. The Ministry of Agriculture has listed this new variety of geng rice among those that are to be heavily demonstrated and promoted nationwide. The growing period in Beijing for these three varieties is 145, 150, and 148 days respectively. Zhongdan No 1 is highly resistant to rice blast; Zhongdan No 2 is moderately resistant to rice blast and bacterial blight; and Zhongdan No 3 is highly resistant to rice blast, and its resistance spectrum is broader than for Zhongdan No 1. Between 1976 and 1978, Zhongdan Nos 1, 2, and 3 were experimented with at the Qianyang Rice Experimental Station of the Dandong Municipal Institute of Agriculture where they produced 3 year average yields that were 93 percent, 30 percent, and 36.4 percent higher respectively than for control variety "Fengjin." These three varieties are suited for planting as spring rice or as the crop following wheat in Liaoning, Beijing, Tianjin, Hebei, Shandong, Hubei and the Longnan region of southern Shaanxi. [Text] [Beijing RENMIN RIBAO in Chinese 24 Feb 81 p 2] 9432

SPRING TEA HARVEST--After surmounting the disadvantageous climatic effects of last winter's drought and this spring's low temperatures and much rain, spring tea output in the agriculture and land reclamation system this year won a fairly good harvest. On the basis of incomplete statistics from 10 provinces and regions, estimated total tea output for the spring is 110,862 dan, a slight increase over last year's 109,000 dan. Hunan Province's spring tea produced a fairly large bumper crop, and Hunan was the province with the greatest increase in output. It is forecast to amount to 12,870 dan, a 34.6 percent increase over last year. Spring tea output for Zhejiang Province is estimated at 29,000 dan, and output from Fujian is estimated at 27,700 dan, increases over last year of 5 and 12 percent respectively. As a result of the climate, fairly great decline took place in spring tea output from Hubei, Yunnan, and Guangdong provinces. [Text] [Beijing ZHONGGUO NONGKEN [CHINESE AGRICULTURAL RECLAMATION] No 8, 24 Aug 80 p 40] 9432

RURAL PRODUCE PRICES--Beijing, 21 Apr (XINHUA)--Usually in March and April each year, grain prices in China's rural areas go up due to temporary seasonal shortages. In March and April this year, however, grain supplies have increased at rural fairs and prices have remained stable. According to statistics, at 206 rural fairs in all parts of the country, the volume of business in the first quarter of this year increased by 25 percent over the same period last year. The quantity of grain on sale at these rural fairs increased by 16 percent; fats and oils, 42 percent; meat, poultry and eggs, 10 percent; aquatic products, 63 percent; vegetables, 11.4 percent; and fruits and nuts, 21 percent. [OW220521 Beijing Xinhua Domestic Service in Chinese 1148 GMT 21 Apr 81]

AGRICULTURAL MACHINERY MEETING--Harbin, 15 Apr (XINHUA)--Twenty-two agricultural machinery manufacturing enterprises in the country and some agricultural machinery management, use, research and supply units recently held a meeting in Harbin, Heilongjiang, to listen to opinions of users. Responsible persons of these enterprises and units expressed their determination to further improve their products and provide better agricultural machinery for the marketable grain bases in the three northeast provinces. [Beijing Xinhua Domestic Service in Chinese 0025 GMT 15 Apr 81]

SOUTH CHINA PRECIPITATION--Beijing, 16 Apr (XINHUA)--Rain has continued to fall over most parts of southern China. Precipitation in areas south of the Changjiang River and southern China ranged from 15 to 50 mm in the past 4 days. Southern Hunan, western Guangdong, eastern Guangxi and the central part of Jiangxi have registered 50 to 100 mm of precipitation. Ever since mid-March rain continued to fall intermittently over areas south of the Changjiang River with short spells of heavy rain and rainstorms. The continuous rainy weather in southern China is unfavorable for rice transplanting. [Beijing Xinhua Domestic Service in Chinese 1237 GMT 16 Apr 81]

CSO: 4007/370

BRIEFS

ANHUI PREFECTURE PRODUCTION--Anhui's Fuyang prefecture plans to expand this year's sorghum and tobacco crops to 1.5 million mu and 230,000 mu respectively, an increase of 66 percent and 91 percent over last year. [OW151215 Hefei Anhui Provincial Service in Mandarin 1100 GMT 10 Apr 81]

CSO: 4007/370

COMMENTATOR URGES DEVELOPMENT OF CATTLE RAISING

Fuzhou FUJIAN RIBAO in Chinese 29 Jan 81 p 1

Article by Commentator: "Use of Grassy Slopes to Raise Cattle"

[Text] Utilizing grassy slopes for large scale cattle and sheep raising is an enterprise with a bright future in our province. In recent years, attention has been paid to it in some places and we hope that all prefectures and counties pay attention to it. The farms established in Jianyang Prefecture for breeding fine strains of livestock and improved varieties of forage grass which we are going to introduce today have provided practical technical measures for developing herbivorous animals by taking advantage of mountainous areas. Places having similar conditions may follow this example.

Mountainous areas in Fujian Province cover more than 80 percent of its total area. Hills of a height less than 500 meters above sea level can be found almost all over the province. There is a total of 30 million mu of sloping grasslands. Several of these grasslands are located in the subtropical zone where the climate is temperate and grass resources are bountiful. Conditions here are much better than the prairie grazing lands in northern China. This is one of the superior features our province can utilize in economic construction. We have to awaken these grass mountains which are "fast asleep" so that they can serve the four modernizations. This year, under the policy that takes readjustment is our principal task, we must move our livestock husbandry forward at the same time as we firmly grasp grain production. Based on calculations that in foreign countries one head of beef cattle can be raised on 15 mu of grassy slopes, sloping grasslands available in our province can approximately raise 1 million head of beef cattle. At present, there are only 900,000-head of cattle and most of them are draught cattle. What a glory it would be if Fujian Province could raise 1 million head of beef cattle!

Since the Third Plenary Session of the 11th Party Central Committee, our province has achieved definite results in readjusting the structure of the agricultural economy. However, animal husbandry accounts for only a small portion of the five industries. [agriculture, forestry, animal husbandry, side-line production and fishery] So far as animal husbandry itself is concerned, hog raising is much more popular than cattle raising. At present, the meat supply on the market lags far behind the needs of the people's livelihood. In addition to continuing to vigorously develop hog raising, matters such as the large-scale raising of cattle and sheep should also be put on the agenda of the day. Developing herbivorous animals will not cause a conflict with farmers over land, but, on the contrary, will help save grain. Furthermore, supplemental labor force in the rural areas such as women and the old and young may be utilized. Especially when feed for hog raising is insufficient in our province, it is even more necessary for us to actively develop herbivorous animals. By conscientiously doing this job well, not only will our collective income and the income of our commune members be increased, but also the meat supply on the market will be improved. Besides, it can support our export to foreign countries and promote the development of agricultural production as a whole. Is this not a way to kill several birds with only one stone and thereby activate our livestock industry?

Practice in various places proves that the key to moving cattle and sheep raising forward lies in continual elimination of the pernicious influence of leftist ideology, emancipation of thinking, and relaxation of policies. In some places cattle and sheep raising failed to develop rapidly because of the failure to implement policies. Skepticism prevails among several comrades especially about raising cattle privately and the masses are afraid of policy changes. That is to say, directions and policies of the Party Central Committee concerning agricultural and livestock production need to be further publicized and implemented. The new "Article 60" explicitly stipulates: It is necessary to vigorously develop such animals as hogs, cattle, sheep, rabbits, chickens, ducks and geese in accordance with local conditions. At present, we must clearly announce: Cattle and sheep can be raised collectively or privately without constraints. At the same time, concerned departments should adopt realistic measures giving necessary support by providing capital, feed, young animals, and raising techniques in order to specifically help commune members solve the practical difficulties they face in the course of stock raising. Special attention should be paid to putting into effect policies encouraging the propagation of calves. Attention should also be paid to raising cows and ewes. Commercial as well as supply and marketing departments must determine price on the basis of quality and make reasonable purchases in order to protect enthusiasm of commune members who raise cattle and sheep. Only by doing so can we make it possible to rapdily develop cattle and sheep raising.

Taking vigorous action to introduce fine breeds of livestock is an indispensible measure in developing cattle and sheep raising in our province. In the past 1 to 2 years, our province has been using frozen granular semen from bulls of foreign fine breeds (such as Simmental, Holstein, Murrah Water Buffaloes, Charolais and the Hereford) to breed with local dairy cows, yellow cattle and water buffaloes. The first generation of the hybrid calves have already come into the world. Close attention must continuously be paid to breeding with frozen semen and improving the breed of cattle. Especially the Charolais of France is one of the large beef breeds in the world. A mature cow of this breed weighs 1,100 kilograms and a newborn calf may weigh more than 40 kilograms. Its dressing percentage reaches 65 to 70 percent. With grazing as the main food source and a small amount of supplement feed, an 18 months old calf of this breed may weigh 250 kilograms. The work capability of the first generation of hybrid cattle has been greatly increased in comparison with the local yellow cattle. The Aquitaine of France is also a fine beef breed. It is necessary to pay more attention to the introduction of fine beef breeds from countries all over the world. We must, at the same time, and throughout the province investigate and research, find out the situation, work out plans, pay close attention to surveying and transforming the grassy mountains and slopes, attach great importance to the establishment of livestock bases, actively launch scientific activities, and sum up and promote advanced experiences in such areas as scientific utilization of grassy slopes and scientific cattle and sheep raising, in order to strive for greatly improving the level of livestock husbandry in our province in a shorter period of time.

BRIEFS

RURAL SAVINGS--Rural savings in our province last year successfully achieved a big increase, the third year in a row. It increased by 120 million yuan, a 92 percent increase over that of the same period in 1979. Following the implementation of variour economic policies of the party in rural areas, agricultural production of communes and brigades at various places, especially commodity production and legitimate household sideline production of commune members has developed further and the income of commune members has developed further and the income of commune members greatly increased. Rural savings of both Nan'an and Jinjiang counties reached more than 23 million yuan last year. Putian County, which has deposits approaching 19 million yuan, had an increase of more than 6 million yuan in savings last year alone. Counties and prefectures which have savings deposits exceeding 10 million yuan include suburbs of Fuzhou, Fuqing and Minhou. The number of communes having deposits exceeding 1 million yuan have increased from nine in 1979 to 43 last year. Minqing County as a whole had an average of 36 yuan deposit per capita of its agricultural population. This still ranks first in the whole province. Average per capita deposit of the agricultural population in Sanming Municipality and Shunchang County has shown an increase of 15 to 19 yuan compared with that of 1979. The Caiban Brigade of Longhai County abounds with narcissus. After a bumper harvest of narcissus, deposits per commune member increased to average 232.90 yuan which help the brigade leap to first place in the whole province so far as per capita deposit of its agricultural population is concerned. [Text] [Fuzhou FUJIAN RIBAO in Chinese 8 Feb 81 p 1] 9560

RURAL PURCHASING POWER--Following the development of rural economy in Fujian Province, the peasants income get a general raise and purchasing power rose rapidly. Rural purchasing power in the whole province last year reached 3.965 billion yuan, which was an increase of 17 percent compared with that of the previous year. Sales of the means of livelihood registered an increase and supply of principal commodities also showed improvement. Retail sales of the means of livelihood last year reached to more than 1.454 billion yuan. Supply of 24 principal commodities of food, clothing and articles for daily use all have shown a great increase compared with that of the previous year, among which the supply of sewing machines increased by 78 percent, transistor radios by 40.4 percent, bicycles by 25 percent, round nails by 23.9 percent, iron wire by 43 percent, soap by 46.7 percent, and cotton jersey and cotton trousers by 34 percent. Supply of commodities that were in short supply in the past such as dika [3321 0595], iron wire, round nails, soap, detergent powder, electric bulbs, batteries in various sizes, straw mats and toilet tissues, has been much improved at present. As a result of the increase of the peasants' income, spending has begun to shift. First food, then clothing, and articles for daily use to articles for daily use first, then clothing and food. According to statistics, the supply of commodities for daily use increased by an average of 25 percent, clothing by 13 percent, and food by 8 percent. What is comparatively conspicuous is that there are people who have money in their pockets waiting to buy high and medium grade goods. [Text] [Fuzhou FUJIAN RIBAO in Chinese 2 Feb 81 p 1] 9560

CSO: 4007/271

BRIEFS

GUANGDONG PREFECTURAL PRODUCTION--Guangzhou, 19 Apr (XINHUA)--Foshan prefecture, Guangdong, increased its agricultural production in 1980 as compared with 1979. A breakdown of the increase: grain by 570 million jin, sugarcane by 450,000 dun, fish-breeding by 65,000 piculs, silk cocoons by 9,500 piculs, peanuts by 44 percent, marketed pork by 8.1 percent, total income of commune-run and brigade-run enterprises by 24 percent and the profits they earned by 16 percent. [OW220209 Beijing Xinhua Domestic Service in Chinese 0114 GMT 19 Apr 81]

CSO: 4007/370

BRIEFS

WATER CONSERVATION--Gaocheng county, Hebei Province, has taken effective measures to prevent the fall of the water table. Location for sinking wells have been carefully chosen so as not to affect the water table underground. Arrangements have been made for rainwater, excess water in reservoirs and nontoxic industrial waste water to sink into the ground so as to replenish ground water. Some 1,100 wells, which were previously dry, now have water in them. Because of the efforts made in water conservation, there was sufficient water for irrigation at the time of drought last year. Last year the country's grain output averaged 980 jin per mu and jinned cotton 80 jin per mu. [Beijing Domestic Service in Mandarin 0400 GMT 31 Mar 81]

GRAIN OUTPUT--Shijiazhuang, 9 Apr (XINHUA)--The 1980 multiple crop index of Tangshan prefecture, Hebei, was 40 percent lower than 1976, but grain output was 68 percent higher. [Beijing Xinhua Domestic Service in Chinese 0130 GMT 9 Apr 81]

CSO: 4007/370

RESULT OF MECHANIZATION REVEALED

Beijing ZHONGGUO NONGKEN [CHINESE AGRICULTURAL RECLAMATION] in Chinese No 8, 24 Aug 80 pp 6-7

[Article by Liu Liangyu [0491 5328 3768]: "Much Greater Use Should Be Made of the Advantages of Agricultural Mechanization in Reclamation Areas of Heilongjiang"]

[Text] Last year when I participated in an economic survey of reclamation areas in Heilongjiang Province, I saw that the mechanization of agriculture here brought great advantages. The reclamation areas have 28 million mu of cultivated land on which a labor force numbering 260,000 is directly involved in farming for an average of somewhat more than 100 mu per person, or almost 20 times more than the national average of 5 mu per person in the agricultural labor force. Most of the major farm work done in the fields employs machinery. Not only is more than 95 percent of the plowing and sowing done by machines, but 80 percent of the harvesting is also done by machines. The number of combines in use here account for almost half the national total. Here there are also quite strong farm machinery manufacturing facilities, and a group of technical cadres with abundant experience. In 1979, grain output for the reclamation area labor force was 17,000 jin per capita, eight or nine times the national average. Commodity grain turned over to the state amounted to 2.7 billion jin for a 49 percent commodity rate (for Heilongjiang Province, it was 26 percent). Wheat turned over to the state by reclamation areas became the principal source of wheat in Heilongjiang Province. Reclamation area exports of soybeans amounted to 140,000 tons and occupied a major position in total national soybean exports. In view of reclamation area characteristics of large amounts of land relative to population, much mechanized equipment, and a high commodity rate, in order to make the most of advantages, efforts should be put into the mechanization of agriculture.

At an earlier time, a hot discussion raged in periodicals as to whether China should mechanize agriculture. These discussions raised different points of view, some of which require further study and discussion. I would also like to raise some views on problems I saw in the course of making a survey.

1. The Question of Mechanization and Increasing Output Per Unit of Area

Some people maintain that the mechanization of agriculture has very little to do with increasing output per unit of area. They advocate work on biological techniques first. But on the basis of experience in Heilongjiang's reclamation areas, agricultural mechanization played a major role in increasing output per unit of area. Virtually none of the measures for increasing production on farms could be separated from mechanization. All farms where per unit yields were high were farms that had done a good job of agricultural mechanization. In 1979, the Keshan Farm with 160,000 mu of wheat and the Shuguang Farm with more than 40,000 mu of wheat had yields of more than 400 jin per mu, which were derived by making full use of the advantages of agricultural mechanization combined with advanced and comprehensive scientific techniques suited to local conditions. Another example was the 853 Farm, which as part of efforts to increase per unit corn yields, made precision seed drills, plows for deep and loose plowing, cultivating and fertilizer spreading machines, between the row cultivators, and chemical herbicide sprayers, which made machine operations a requirement for intensive care in the process of producing corn. In 1978, corn output from somewhat more than 100,000 mu broke 500 jin per mu. In 1978, No 2 team of No 5 branch farm of Youyi Farm used corn planters brought in from elsewhere, completing in one operation the farm work that would have required five or six operations by hand, and the quality of the work was very good as well. Corn yields increased from the former 300 jin per mu to more than 500 jin per mu. During the serious drought of 1979, two circular spray irrigation machines were brought in from elsewhere and used for the spray irrigation of most of the wheat. This plus the selection of superior varieties and increased applications of fertilizers produced yields of 456 jin per mu from more than 6,000 mu of wheat for a more than doubling of the province's average yields per mu. The facts from numerous farms demonstrate that machines can do intensive farming, and they play a major role in increasing per unit yields. Biological techniques are important in increasing yields, but machines are also needed to carry out the biological techniques.

2. The Problem of Mechanization and Profits

Inasmuch as China's farm machine industry standards are low, the quality of farm machines poor and prices high, all of which impair the economic effectiveness of using them, quite a few people have become wary of the matter of profit from agricultural mechanization, and some say that the mechanization of agriculture can only be justified politically but not economically. As a result of 20 to 30 years experience in the reclaimed areas of Heilongjiang, the country has beneficial experience with mechanized farming. In 1979, from the 28 million mu of grain and beans throughout the reclamation area, costs averaged 27.47 yuan per mu or .13 yuan per jin. This was .04 yuan less than the .17 yuan selling price. At the No 2 team of the No 5 branch farm of Youyi Farm, 1979 costs ran 37 yuan per mu. Though an average 40 percent higher than costs throughout reclaimed areas, as a result of high per unit yields, costs were .11 yuan per jin for grain and beans, or 20 percent lower than costs for the reclamation areas as a whole. Since costs were lower than selling price, in the current situation of low yields per unit, the planting of grain and beans in reclamation areas has brought profits for many years. In 1979, profits were more than 280 million for an average profit of more than 10 yuan per mu of cultivated land. Profit at the Keshan Farm amounted to 27.80 yuan per mu for an 18 percent rate of profit.

Meriting attention is that as the level of agricultural mechanization increases, use of labor in production greatly decreases, and a striking decline occurs in wages as a cost. In the case of No 2 team of No 5 branch farm of Youyi Farm, following mechanization of agriculture in 1978, a tremendous decline took place in expenses for manpower as part of the cost of producing corn and soybeans. Please see the following table:

	1977 (Using original machines)	1978 (Using machines from elsewhere)	1978 (Percentage decline over 1977)
Corn	10.13 yuan	0.4 yuan	96.1
Soybeans	2.12 yuan	0.29 yuan	86.6

Decrease in expenses for manpower is the major way of deriving the most profit from a reduction in production costs. A comparison of the effects on production costs of expenses for manpower and for machine operations in the production of wheat by several units is shown below:

Units: Yuan per jin

Item / Units Concerned	Manpower expenses as costs per mu of wheat	Machine expenses as costs per mu of wheat	Wheat yields per mu	Cost of wheat per jin
852 Farm Heilongjiang	2.06	5.85	354	0.09
15th Company, Suibin Farm, Heilongjiang	0.78	5.39	266	0.089
Shihezi Main Farm, Xinjiang	13.88	9.24	342	0.144
Xiaoniangtai Brigade, Nanxiao Farm, Beijing	24.82	6.65	552	0.163

(Note: Figures for the Main Farm in Shihezi and for the Nanxiao Farm are for 1978)

The table shows that the difference in expenses for machines for the four units is not very great, but the difference in expenses for manpower varies as much as 30 times; thus there is a great difference in economic effectiveness. Take the cases of the 15th Company, Suibin Farm and the Xiaoniangtai Brigade, Nanxiao Farm as examples. There is not a great deal of difference in the expenses of machine farming for the two, but expenses for manpower average only 0.78 yuan per person for the former while they amount to 24.82 yuan for the latter. Therefore, the rate of profit over costs for wheat for the former is more than 90 percent, while the latter has no profit despite an output that is more than double that of the former.

The quantity of value of a commodity is determined by the socially required labor time for production of the commodity. The producer of a commodity always has to reduce the consumption of labor below the level of socially required labor time in order to make a profit, and the mechanization of agriculture is just such a major means of deriving profit from agricultural produce. Experience in both China and abroad attests to this matter.

Of course, current conditions in China still do not permit all rural villages to mechanize. Nevertheless, it is extremely important to realize this matter, and where both an urgent need and conditions for the promotion of the mechanization of agriculture exist, to reduce the labor force engaged in agriculture very rapidly in such places, transferring them to other industries that create wealth for society.

3. The Problem of Mechanization of Agriculture and Investment

How much investment will be needed for the mechanization of agriculture? In the current situation in which China's economic strength is quite weak and building of the four modernizations requires a great amount of investment, this is a question to which everyone is extremely attentive. Most of the field operations in the grain and bean farming industry in the reclaimed areas of Heilongjiang have been mechanized. Investment for mechanization as figured on the original value of tractors, harvesters, tractor-pulled farm implements, and transportation equipment averaged 25.70 yuan per mu. Figuring a profit of 10 yuan per mu from the growing of grain and beans in 1979 throughout the reclaimed areas, investment in farm machines can be recovered within 3 years.

In an agricultural mechanization pilot project run by the No 9 Team of the No 1 branch farm of Sunke Farm, select equipment for agricultural mechanization averaged only 32 yuan per mu, and profits from the single year of 1979 recovered 85 percent of the total investment in farm machines. The Second Team of the No 5 branch farm of Youyi Farm imported equipment from abroad for a quite large investment, but because the economic effectiveness of the use of these machines was high, they recovered 20 percent of the investment within the single year of 1979. Thus, in about 6 years, the investment can be recovered. If we could manufacture such machinery ourselves, the investment could be recovered in about 3 years. From this may be seen that in investing in agricultural mechanization, so long as strict examination is given economic effectiveness, and the machines are used properly, results of small investment for fast results can be obtained.

Small investment, fast results, and great benefits are a prominent advantage derived from agricultural mechanization of the reclaimed areas of Heilongjiang. This advantage must be used to the greatest extent so that this greatest commodity grain base in the country will make a greater contribution to the country.

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CSO: 4007/267

BRIEFS

COUNTY'S AFFORESTATION--Harbin, 10 Apr (XINHUA)--Suihua county in Heilongjiang has built many forest belts around its farms since 1976 to insure bumper agricultural harvests. By 1980 the county's total afforested acreage had reached 380,000 mu. The building of these forest belts, which include poplars, willows and pines, has resulted in an increase in grain production. The county's average grain output from 1978 to 1980 topped the average for the 3 previous years by 118 million jin. Grain delivered to the state from 1978 to 1980 rose by 75.5 million jin. [Beijing Xinhua Domestic Service in Chinese 0230 GMT 10 Apr 81]

CSO: 4007/370

BEIJING RIBAO REPORTS COMMUNE MANAGEMENT REFORM

OW141447 Paris AFP in English 1433 GMT 14 Apr 81

[Text] Beijing, 14 Apr (AFP)--A major reform in the management of people's communes in the Chinese countryside is in the pipeline, aimed at granting them a more technical and less political character.

The BEIJING RIBAO today reported the establishment of "administrative stations" at Kaifeng in Henan Province, central China. Each commune has eight stations, which earned it the nickname "Stations Eight."

The stations will cover: management, popularization of agricultural technology, water conservancy, agricultural mechanization, forestry, seeds, cattle raising and electricity for agriculture.

The stations, each with a staff of three to five, will give technical advice to peasants but the newspaper said they might play a role in production.

The setting up of these administrative stations, reported for the first time in China, should lead to a major reform in the structure of people's communes established in 1958 under the guidance of Chairman Mao Zedong if the system is generalized.

The people's communes were first conceived by Chairman Mao as the basic structure for collectivization in the countryside but were later turned into political administration organizations.

The apparent reform underway could give a clearer economic character to people's communes, which would look more like enterprises. The daily said in this respect that "Stations Eight" would have to be self-financed in the future. Some of them, like those in water conservancy, seeds and agricultural machinery, could have their own production units.

At present "Stations Eight" are financed by communal enterprises. They can hire young peasants freshly graduated from technical schools who will sign employment contracts while continuing to work on their lands outside their work at the station. The BEIJING RIBAO said this system was mainly aimed at diversifying production in the countryside. The paper reported that 1,230 "Stations Eight" employing 3,081 people had been set up at Kaifeng prefecture.

These new bodies play "an active role" in the transfer of production responsibility to the village, known as "production brigade" under the current system favored by the Chinese authorities.

This system contrasts sharply with that of people's communes as conceived by Chairman Mao.

The implementation of people's communes was followed in 1959 by an economic catastrophe caused by "the great leap forward" launched by Chairman Mao.

CSO: 4020/174

BRIEFS

HUBEI COUNTY HAILSTORM--On the night of 15 April, Xingshan county, Hubei, was hit by a violent storm and hail, causing damages to crops and houses. The Xingshan County Party Committee and the County People's Government have promptly organized five relief teams to give aid to the seriously hit communes and brigades. A relief fund of 100,000 yuan and 770,000 yuan for agricultural loans have been raised and seeds have been made available for affected communes and brigades to resume production. [Wuhan Hubei Provincial Service in Mandarin 1100 GMT 21 Apr 81]

HUBEI COUNTY FISHERY--Wuhan, 9 Apr (XINHUA)--Jiayu county, Hubei, in 1980 increased fish output by 46 percent. The county produced more than 6 million jin of fish in 1980, topping 1979 by more than 2.76 million jin. It delivered more than 840,000 jin of marketable fish to the state, topping 1979 by more than 170,000 jin. [OW151225 Beijing Xinhua Domestic Service in Chinese 0125 GMT 9 Apr 81]

CSO: 4007/370

BRIEFS

DIESEL OIL RATIONING--The People's Government of Xinshao county in Hunan has instituted a unified system of rationing diesel fuel for agricultural machinery. Each farm machine in the county has been allocated a certain quantity of diesel fuel for 1981. The rationing system was instituted because the number of agricultural machinery in Xinshao increased but the amount of diesel fuel allocated by the state for this year is less than that for 1980. [Changsha Hunan Provincial Service in Mandarin 1100 GMT 19 Apr 81]

HUNAN ILLEGAL TREE CUTTING--Recently Hunan's Huarong county seriously dealt with a case of wantonly cutting trees and bamboo of state forest farms. The County Security Department arrested three major culprits and detained nine others in the case. The County CCP Committee also took disciplinary action against seven party members who were also involved in cutting trees. Several commune members of (Dongwang) production brigade of Dongshan commune in Huarong county had gone to a state farm in Jishou county on 27-28 February to cut bamboo. They beat up and injured a public security man of the farm when he tried to stop them. The incident led hundreds of commune members in Jishou county to cut trees and bamboo in a state forest farm in Huarong county. As a result, some 3,000 mu of trees and bamboo was damaged with 327 mu virtually cut down. Two workers' homes were also destroyed and some of their money and properties stolen. [OW211259 Changsha Hunan Provincial Service in Mandarin 1100 GMT 20 Apr 81]

HUNAN COUNTY COTTON--Yueyang county, Hunan, plans to plant 75,000 mu of cotton this year. More than 60,000 mu will be sown in April. [OW201229 Changsha Hunan Provincial Service in Mandarin 1100 GMT 17 Apr 81]

HOG PROCUREMENT--Liuyang county, Hunan Province, has decided to purchase as many hogs as the peasants in the county are willing to sell this year. It is expected that they will sell a total of 180,000 head, an increase of 20 percent over 1980. [OW201229 Changsha Hunan Provincial Service in Mandarin 2315 GMT 18 Apr 81]

FLOOD DISASTER--Heavy rain hit Hunan's Chaling county from the evening of 6 April to the next morning, causing damages to 23 communes. The County Party Committee immediately organized the whole county to combat the disaster and carry out relief work in the disaster area. By 9 April, some 1.23 million jin of early rice seeds was rushed to the county. Proper arrangements have also been made for the livelihood of the victims. [Changsha Hunan Provincial Service in Mandarin 1120 GMT 9 Apr 81]

COUNTY RELIEF WORK--A strong wind and hailstorm hit Hunan's Ningyuan county on 29 April, causing damage to the people's livelihood and agricultural production in some areas. Local authorities immediately organized 249 office cadres and medical personnel to go to the disaster area for relief work. They also appropriated a 70,000 yuan relief fund and 2 million jin of grain to help the victims overcome their immediate difficulties. At the same time, the County Party Committee and People's Government organized three work groups to help restore agricultural production. Now the victims' daily life has been assured and agricultural production is also being restored. [Changsha Hunan Provincial Service in Mandarin 1100 GMT 10 Apr 81]

CSO: 4007/370

BRIEFS

FIELD MANAGEMENT--Commune members in Huaian county, Jiangsu Province are actively taking part in spring farming. They have topdressed 630,000 mu of barley, naked barley and wheat and 120,000 mu of rape. [Nanjing Jiangsu Provincial Service in Mandarin 2300 GMT 11 Apr 81]

CSO: 4007/370

BRIEFS

RICE PRODUCTION--By 5 April, Nancheng county, Jiangxi, had planted 36,000 mu of early rice, accounting for 15 percent of the total acreage of early rice it plans to grow. [Nanchang Jiangxi Provincial Service in Mandarin 1100 GMT 13 Apr 81]

JIANGXI AGRICULTURAL PRODUCTION--To date, Gaoan county, Jiangxi, has fulfilled its target of planting 650,000 mu of early rice and 101,000 mu of cotton. [Nanchang Jiangxi Provincial Service in Mandarin 1100 GMT 13 Apr 81]

CSO: 4007/370

BRIEFS

JILIN COUNTY GRAIN--Changchun, 14 Apr (XINHUA)--In 1980 Huaide county, Jilin, delivered 586 million jin of grain to the state, topping the 1979 figure by 17.2 percent and ranking first in the province. Its income from diversified economy reached 41.5 million yuan, topping the 1979 figure by 35.4 percent and accounting for 21.9 percent of the total income from agriculture and sideline production. [Beijing Xinhua Domestic Service in Chinese 0053 GMT 14 Apr 81]

CSO: 4007/370

BRIEFS

LIAONING RAINFALL--During the 23-25 March period, Liaoning Province received some rainfall. The drought-ridden Chaoyang prefecture had 16 to 21 millimeters of rainfall. Suizhong county had 43 millimeters. Shenyang, Liaozhong, Xinmin, Zhangwu, Dandong and Xingcheng had 30 to 33 millimeters. Yingkou county had only about 10 millimeters. Droughts in Chaoyang prefecture and Central Liaoning have been somewhat relieved, but efforts are still needed to combat drought. [Shenyang Liaoning Provincial Service in Mandarin 1100 GMT 25 Mar 81]

PRIVATE PLOTS--Shenyang, 21 Apr (XINHUA)--Shenyang municipality of Liaoning Province has expanded the private plots allocated to suburban commune members for growing crops and fodder grass by some 96,000 mu. This has brought such private plots to approximately 10.5 percent of the total acreage of the municipality's cultivated land. The plan for expansion of private plots is aimed at encouraging commune members to engage in sideline production, such as growing vegetables and raising domestic animals on their own, thus increasing the nonstaple food supply on the market. Now, 83,000 households in the municipality are raising hogs, chickens, cattle, sheep, goats or rabbits or engaged in beekeeping, accounting for 17 percent of the agricultural households in the municipality. A number of private vegetable gardens have also come into being. [Beijing Xinhua Domestic Service in Chinese 0143 GMT 21 Apr 81]

AFFORESTATION--The Liaoning Provincial Party Committee and People's Government issued a circular on 26 March urging efforts to carry out afforestation work throughout the province. It states that the percentage of forest cover is expected to reach 30 percent by 1990. [SK310909 Shenyang Liaoning Provincial Service in Mandarin 1100 GMT 30 Mar 81]

CSO: 4007/370

TIMELY SOWING OF WHEAT, RICE URGED

Yinchuan NINGXIA RIBAO in Chinese 2 Feb 81 p 2

[Article by He Zhongkang [6320 0112 1660], Autonomous Region Agricultural Techniques Promotion Station: "Do Farm Work in the Right Season; Sow Suitably Early"]

[Text] Ever since the great reduction in paddy rice output in 1976 caused by cold weather, the work of agricultural techniques promotion has emphasized investigation and research to solve the problem of delays in the sowing of rice and spring wheat that cause delays in the farming season. Several years of production experience, and scientific practice have demonstrated that sowing at a suitably early time and doing farm work in the right season are keys to assuring consistently high yields of grain crops.

After 1974, deep applications of fertilizer were called for prior to the sowing of spring wheat, thereby delaying the sowing season and seriously impairing spring wheat output. This tendency was rapidly corrected in recent years with the sowing of seeds just before the spring thaw for suitably early sowing, which changed the situation of low and inconsistent wheat output. For a long time total grain output in the suburbs of Shizuishan City held at around 50 million jin. Since 1978, when the period for sowing spring wheat was moved forward from mid to late March to early to mid March, wheat output has increased year after year. The 1978 increase over 1977 was 22.4 percent, and 1979 saw another 27.4 percent increase over the previous year. Last year summer grain output totaled another 2.8 percent increase over the year before last. Grain output in Zhongning County also remained for a long time in a state of being neither high nor consistent, but in 1979, the time for sowing of spring wheat was changed from mid-March to from late February to early March after which wheat output increased by 23.6 percent over the previous year. Last summer's grain output again increased 4 percent over the previous year. In Zhongwei County, ever since 1978 when planting of spring wheat began to be done in early March, grain output has increased year after year. The year after year increases in grain output by these three counties are related to suitably early sowing. This was particularly apparent in 1979 when a general decrease in wheat output occurred throughout the region as a result of infestations of aphids and yellow dwarf disease, yet grain output increased in these three counties as a result of suitably early sowing. These facts demonstrate that with proper understanding and mastery of natural laws, and the devising of ways to surmount disadvantageous natural conditions, the threat of natural disasters may be reduced or eliminated.

During the four years of 1973, 1974, 1975, and 1980, bumper rice harvests were reaped throughout the autonomous region with 13.1 percent, 4.9 percent, 13.5 percent, and more than 20 percent increases in output respectively over each of the previous years. The common characteristic in the planting of rice during these bumper years were: propagation of Jingyin No 39 seedlings under conditions of optimum temperature and moisture, and advocacy of sowing in early to mid-April and transplanting in early to mid-May (for details, see the article titled, "Essentials of 1980 Rice Planting Techniques," NINGXIA RIBAO, April 1980). Fairly great decreases in rice output occassioned by coldness in 1972, 1976, and 1979 saw reductions in rice output over each of the previous years of 13.3 percent, 58.9 percent, and 9.9 percent respectively. In these lean harvest years, sowing of Jingyin 39 was delayed until late April or even afterward. Since 1977, some communes and production brigades have profited from the lessons of experience in the reduction of output occassioned by delayed sowing of rice to make a change from delayed sowing to suitably early sowing. Cases in point are the Yancundun Production Brigade of Liangtian Commune in the suburbs of Yinchuan, the Manchun Production Brigade of Manchun Commune, and the Dongchuan Production Brigade of Yanghe Commune in Yongning County, which have annually adhered to the propagation of seedlings from early to mid-April and the transplanting of seedlings from early to mid-May. Regardless of whether the year was one of high temperatures or low temperatures, they have won increased output every year. Data obtained from experimental research on rice also shows that early propagation of seedlings and early transplanting of seedlings are the keys to consistently high output from rice. In the low temperature year of 1972, the crops department of the Autonomous Region Institute of Agriculture test sowed Jingyin No 39 rice at the Wangtaibao Experimental Farm. On 25 and 26 March, they planted seedlings grown under optimum temperature and moisture conditions from which yields ran from 1,137.8 jin to 1,332.4 jin per mu, a from 8.8 to 27.7 percent increase in output over the late April planting of rice whose seedlings were grown by the juanyang method [0608 4441 3127]. In high temperature 1980, Ningxia Academy of Agriculture conducted experiments at the Hongxing Production Brigade of Yanghe Commune in Yongning County. The rice sown on 15 April showed higher output than rice sown in early May.

From this may be seen that in high temperature and low temperature years alike, and with wheat as with rice, suitably early sowing is the key to overcoming the disadvantageous effects of temperature on crops and assuring consistently high yields in agriculture. In the Ningxia Autonomous Region, much potential remains to be tapped in suitably early sowing. First of all, the experimental research data shows that output is highest from spring wheat sown between mid and late February, and from Jingyin No 39 rice sown in early to mid-April, but sowing is not done this early in very many places. Second, quite a few places have yet to master the technique of suitably early sowing. Most such places plant spring wheat in mid-March, and plant rice in late April or even later. Even though the best meteorological conditions exist at these times, increases in output are not great, and decreased output may even occur. Therefore, conscientious study of local meteorological conditions, accurate mastery of the agricultural season, and full use of effective accumulated temperatures can bring increased output in agriculture.

In general, spring wheat can sprout and grow at temperatures between 1° and 2°C, and in the Ningxia Autonomous Region, such temperatures are reached at the end of February and in early March. When spring wheat is sown between mid and late February rather than in early to mid-March or later, it grows and develops more rapidly, and spring wheat that is sown early heads, fruits, and comes into milk earlier; heads are more numerous and grains more plump, and output is higher. Rice generally can sprout at 8°C. In the Ningxia Autonomous Region, average temperatures in early April have already reached 8°C, and by mid-April they reach higher than 10°C. Use of plastic sheeting to maintain optimum temperature for the propagation of seedlings during this time results in no problems at all. It is proposed therefore:

1. That the first echelon of counties be mobilized to hold on-site spring wheat planting meetings in mid-February so as to begin sowing of spring wheat in mid-February, making large scale sowing in late February, and winding up in early March. In early April on-site meetings for the sowing of seeds to grow seedlings should be held. Jingyin No 39 rice should be sown around 10 April and completed by 20 April. When necessary, prior to the planting of wheat and rice, 1 or 2 days may be devoted to on-site sowing at seedling propagation meetings throughout the region to promote appropriately early planting.

2. That methods be devised to concentrate some research personnel and to allocate funds in order to study the problem of timing in increasing the photosynthesis utilization rate for farm crops. Cold damage to rice, and hot arid wind damage to wheat should be ranking research problems that should be assigned as tasks to academies of agriculture, institutes of agriculture, the agricultural technique promotion system, and the meteorological system, with allocation of funds and provision of equipment for concerted efforts. Through repeated scientific experiments and experience in production, there can be further understanding and mastery of natural laws for a reduction in the waste of manpower and material resources in agriculture, and full use of the sun's light and heat energy to produce more farm products.

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CSO: 4007/266

FOREST PROTECTION CONFERENCE HELD

Yinchuan NINGXIA RIBAO in Chinese 3 Feb 81 p 1

[Article by Zheng Jiandao [6774 1696 6670]: "Pingliang and Guyuan Prefectures Hold Joint Defense Conference on Protection of Liupanshan Forests; Unify Action and Strengthen Management So That the Green Mountains of Liupanshan Will Long Endure"]

[Text] The Gansu Provincial Pingliang Administrative Office and the Ningxia-Hui Nationality Autonomous Region's Guyuan Administrative Office held a joint defense conference at Guyuan on protection of the Liupanshan forests. The conference achieved agreement on joint defense of the forests, established a joint defense committee for protection of the forests, formulated a charter for the joint defense committee, and advanced forest protection work.

The Liupanshan forest area lies astride the six counties of Pingliang, Huating, Zhuanglang, Longde, Guyuan, and Jinghuan in Pingliang and Guyuan prefectures. Seventy-four delegates from the six counties in these two prefectures plus delegates from communes in the forest area, the state-owned forestry farm, the forest management office, the forest farm, and the forest region police station exchanged experiences in fire prevention to protect the forests, carefully analyzed the situation of poaching that destroys the forests and its causes, and following full deliberation and discussion, unanimously acknowledged that care and protection of forest resources in Liupanshan is a joint responsibility of the two provinces and two prefectures that cannot be shirked. It requires close coordination, unified action, the adoption of various measures, and the ideological education and education in the law of the masses so that the masses clearly realize the important role that good care and protection of the forests plays in promoting production and improving the life of the masses, establishing a new ethic of "protecting the forests is glorious; destruction of the forests is shameful" for real achievement of "mass protection and mass defense." There must be prompt inspections for poaching, for clearing of land, and for setting fires, all of which destroy forests, as well as checking on the beating of personnel protecting the forests, in a resolute attack on criminals who break the laws. There must be an intensification of supervision over country fair trade in forest areas, closing of the free market in timber, institution of unified purchase and unified marketing of timber to put a stop to poaching of timber and offering it for sale, and opportunistic and speculative activities. In all cases where forest rights are in doubt or the subject of controversy, the local government will take matters in hand for a solution, and until such time as demarcation lines are drawn, both parties shall jointly protect the forests with neither party being permitted to fell trees. Counties, communes, forest farms, and forest protection personnel in contiguous areas should maintain regular liaison, exchange experiences, supply each other with intelligence, guard against and help fight forest fires, prevent and control diseases and insect pest infestations, protect rare and valuable animals and plants, go in for the afforestation of barren mountains, hasten the thinning of young sturdy forests, make the green mountains of Liupanshan long endure, promote the four modernizations of mountain regions, and create prosperity for posterity. Currently a dramatic increase has occurred in cases involving destruction of forests; droughts are serious and forest fires can occur in their wake at any time. Care of forest resources will brook no delay. Urgent action must be taken this winter and next spring to work earnestly to protect the forests against fire.

The Liupanshan forest area is a jade green pearl in the vast expanse of the loess highlands that regulates climate, prevents erosion, conserves water resources, assures production of agriculture and the livestock industry, and nurtures several hundred thousand people in forest areas. Last year the State Council formally authorized and designated the Liupanshan forest area as a forest for the conservation of water resources, and made it part of the "three norths" shelter forest system. This joint defense conference is the first such one ever held by the two prefectures of Pingliang and Guyuan, and it will mark a fine beginning in the protection and development of the Liupanshan forest area.

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CSO: 4007/266

NINGXIA

BRIEFS

SPRING PLOWING PREPARATIONS--Rural villages and state farms everywhere throughout the region have worked diligently to get ready for spring plowing and production, creating the conditions for winning a bumper harvest in agriculture this year. Last year, the broad expanse of rural villages and state farms conscientiously carried out the various programs and policies that followed from the Third Plenary Session of the 11th Party Central Committee, and vigorously promoted various forms of a system of responsibility. This together with good climatic conditions won an all-around bumper harvest in agriculture throughout the region. Since the beginning of winter, rural villages everywhere have rallied the masses to conscientiously summarize experiences in increasing production, to further consolidate and perfect various forms of a system of responsibility, to formulate this year's production plans, and to mobilize and organize the masses of commune members to take firmly in hand preparations for plowing and production. Among some of the employees in some state farms subordinate to the autonomous region agriculture and land reclamation system prevails a mentality of "once award money is in hand, take a vacation to visit relatives and friends," which has impaired progress and quality of preparations for plowing. To counter this mistaken mentality and erroneous way of doing things, each farm worked on ideological training, arousing the workers to discussion, with everyone thereby coming to realize that only with solid preparations for plowing and production could there be a foundation for increased output in agriculture this year, thereby giving impetus to preparations for plowing and production. Numerous communes and brigades in Pinglo and Zhongwei counties early defined forms of a system of responsibility for production, which allayed anxieties in the masses, and aroused the enthusiasm for production of commune members, cadres and commune members concentrated their energies on a good job of preparing for plowing and production. Under the leadership of leading cadres in the communes, some communes in Qingtongxia County organized forces for diligent inspection of preparations for plowing and production in production teams and to help production teams solve problems in production. Rural villages everywhere have also conscientiously made the various preparations for spring plowing and production. The farmyard manure accumulated by Zhongwei, Qingtongxia, and Helan counties amounts to more than 95 percent of the fertilizer needed by the summer crops, and this manure has already been spread on about 50 percent of the area. Numerous communes and brigades are now engaged in seed sprouting tests and improved variety exchange work. Inspection and repair of farm machines and implements is also being given urgent attention. Because winter irrigation took place early last year, freezing occurred late, and temperatures have been high since last winter, the layer of dried out soil is fairly thick.

In order to promptly act to combat drought so as to assure smooth progress in spring sowing, every locale has actively worked at leveling the fields, and harrowing them to preserve moisture. Less than a month now remains until spring sowing, and concentration of main forces is underway everywhere, and weak links being taken in hand in further preparation for plowing and production. [Text] [Yinchuan NINGXIA RIBAO in Chinese 3 Feb 81 p 1] 9432

CSO: 4007/266

BRIEFS

SHAANXI PREFECTURE SILKWORM COCOONS--Xian, 17 Apr (XINHUA)--Shaanxi's Ankang prefecture planted 60,700 mu mulberry trees and produced 5.02 million jin silkworm cocoons last year, showing an increase of 10.7 percent and 28.3 percent, respectively, over the preceding year. The prefecture planted 6,600 mu mulberry trees in the first 3 months this year, an increase of 24 percent over the same period last year. [Beijing Xinhua Domestic Service in Chinese 0254 GMT 17 Apr 81]

MILCH GOATS--Xian, 20 Apr (XINHUA)--The number of milch goats in Guanzhong area, Shaanxi, has increased to more than 600,000. In 1980, the area provided 45,000 tons of marketable milk and produced 4,900 tons of dairy products, an increase of 21 percent and 16 percent respectively over the previous year. [Beijing Xinhua Domestic Service in Chinese 0018 GMT 20 Apr 81]

CSO: 4007/370

BRIEFS

SMALL, MEDIUM FARM IMPLEMENTS--By way of assuring the needs of this year's agricultural production, the Shandong Provincial Commune Industries Bureau and commune industries bureaus in the prefectures of Yantai, Changwei, Jining, and Linyi organized personnel in January to conduct an investigation of needs for small farm tools in rural villages, and to formulate this year's production plans. This plan has now been handed down to every jurisdiction. Production of medium and small farm tools used more than 27,000 tons of scrap steel and odds and ends of materials, and 13,000 tons of standard steel and other materials such as pig iron, wood, and pigskin, all of which have been issued to lower levels. Last year Shandong Province was quite attentive to the production and supply of medium and small farm tools, and plans were fulfilled quite well. Their experiences were: steady solution to the cognitive problem of overlooking medium and small farm tools, while at the same time unifying planning and exercising echelon by echelon control. Production plans are uniformly drawn up by the province, but because of the large quantity, numerous kinds, seasonality and regionality of medium and small farm tools, the province, prefectures, counties, and communes exercise echelon by echelon control, divide up the work, disperse production, and market locally the locally made tools. Some products are produced at fixed sites. For the past several years some business units have had slack sales with attendant overstocking of medium and small tools, while at other supplies have been short and farmers were unable to buy them. Last year production units and commercial units coordinated their actions, did a good job of conducting surveys to understand the situation, linked production and marketing plans, signed production and marketing contracts, and adhered to a policy of quality first. Sickles from the Guanqiao Sickle Plant in Teng County, farm shovels from the Jining Municipal Shovel Plant and the Huantai County Shovel Plant, and sickles from the Linyi County Nandao Sickle Plant were respectively commended as top quality products by the Ministry of Light Industry, top quality products by the province, and top quality products by the Provincial Commune Industries Bureau. [Text] [Beijing RENMIN RIBAO in Chinese 28 Feb 81 p 2] 9432

CSO: 4007/276

BRIEFS

RURAL DEVELOPMENT--Taiyuan, 13 Apr (XINHUA)--Ji county, Shanxi Province, produced some 63 million jin of grain in 1979. Last year, despite natural disasters, it still registered a total grain output of some 50 million jin. All-time high records were achieved last year in afforestation, river harnessing, oilseeds production, sericulture, breeding of draft animals, domestic sideline production, total agriculture revenue and commune members' savings deposits. Last year the county alotted 23,000 mu of land to commune members for afforestation and 18,000 mu for growing fodder grass. This, coupled with the system of private plots, greatly aroused the commune members' enthusiasm to increase production. [Beijing Xinhua Domestic Service in Chinese 0700 GMT 13 Apr 81]

CSO: 4007/370

BRIEFS

COUNTY GRAIN PRODUCTION--Last year Pengxi county, Sichuan Province reaped a bumper harvest of grain. The output averaged 170 jin per capita. This achievement was attributed to the implementation of the system of responsibility in agricultural production, which aroused the peasants' enthusiasm to strive for higher output. [Beijing Domestic Service in Mandarin 0400 GMT 4 Apr 81]

CSO: 4007/370

XINJIANG

FARM, SIDELINE PRODUCTION IN 1980 REPORTED

Beijing RENMIN RIBAO in Chinese 28 Feb 81 p 1

[Article: "Flourishing Scene in Xinjiang Farming and Livestock Areas Encouraging"]

[Text] The situation that Xinhuashe correspondents found during a recent visit to some fiscal and trade units in the Xinjiang Autonomous Region is encouraging. Striking increases have occurred in quantities purchased of agricultural byproducts; purchasing power in rural villages has rapidly increased; and new changes have taken place in rural financial work throughout the autonomous region.

In 1980, a prosperous scene such as has been rarely seen in many a year appeared in the agricultural byproducts purchasing operations of state businesses and the supply and marketing cooperative system throughout Xinjiang. Grain procurement quotas were fulfilled earlier than in any year during the past 10 years or more. Some places repeatedly expedited the outward movement of grain to reduce pressure on inadequate storage space. Volume of cotton purchases jumped by more than 80 percent over last year, and quality was also quite good. Quantities of oil crops purchased have not been exceeded during the past 10-odd years, bringing to an end the situation of Xinjiang's inability to supply its own needs for edible oil, with a slight surplus as well. The situation in fulfillment of purchase quotas for livestock and livestock products was also fairly good. In the case of large animals such as horses, cows, and donkeys, the supply and marketing cooperative system alone purchased more than 30,000 head, a more than 60 percent increase over the previous year. Supply and marketing cooperative purchases of dry and fresh melons and fruits such as figs, walnuts, white juicy peaches, and white apricots also increased by more than 40 percent over the previous year.

According to a briefing given by comrades concerned in autonomous region business units, new changes took place last year in the autonomous region's commodity sales. As compared with the previous year, figures for sales of commodities used in daily life increased 22 percent; sales figures for clothing increased 17.8 percent, and food increased 13 percent. Sales figures for high and medium qullity merchandise were higher than for ordinary merchandise. Additionally, as a result of increased peasant income, great increases also took place in construction of new houses and the purchases of furniture. Quantity of sales of nails, hinges, and paint increased tremendously.

Last year country fair trade both north and south of the Tianshan saw new growth. Volume of business increased 64 percent over the previous year with volume of business in agricultural byproducts exceeding 100 million yuan. Country fair prices rose and fell, but remained basically stable.

Last year new growth occurred in financial work in farming and livestock raising areas of Xinjiang. Farmer and herdsman deposits and savings figures created the highest records in more than 20 years. As of the end of last year, farmer and herdsman savings amounted to more than 120 million yuan, a 53 percent increase over the previous year.

9432
CSO: 4007/276

BRIEFS

XINJIANG LIVESTOCK--Some 310,000 head of livestock in Yining county, Huocheng county and Yining municipality have survived cold winter and been moved to new pastures. [Urumqi Xinjiang Regional Service in Mandarin 1300 GMT 29 Mar 81]

SAFFLOWER CULTIVATION--Urumqi, 20 Apr (XINHUA)--About 30 varieties of American safflower have been successfully introduced to Tacheng prefecture in Xinjiang Uygur Autonomous Region. Since 1978, 30 state farms and people's communes in the prefecture have been experimenting with safflower from the United States under the guidance of the Institute of Botany of the Academy of Sciences of China and the Institute of Oil Crops of the Academy of Agricultural Sciences. Safflower (carthamus tinctorius) is valued for its flower, which is used as a Chinese medicinal herb, and for oil from its seed. The newly introduced American varieties have been found to bear bigger and heavier seeds. The amount of oil extracted from the seeds is 150 percent as much as that of local varieties. The climate in Xinjiang is highly suitable for growing safflower so the region is China's largest producer. In 1980, 27,000 hectares were planted in safflower. [Text] [OW211351 Beijing XINHUA in English 1209 GMT 20 Apr 81]

CSO: 4020/174

XIZANG

BRIEFS

ANIMAL HUSBANDRY--The 135,000 animals in Gyirong county, Xizang Autonomous Region, have survived the cold winter. The prospect in livestock breeding is now excellent in the county. [Lhasa Xizang Regional Service in Mandarin 1130 GMT 7 Apr 81]

CSO: 4007/370

RECKLESS LOGGING IN LIJIANG PREFECTURE HALTED

Kunming YUNNAN RIBAO in Chinese 1 Feb 81 p 1

[Text] Active implementation of the State Council's "Urgent Circular on a Resolute Halt to Reckless Cutting and Denudation of Forests" and decisive action to halt the reckless cutting and denudation of forests on the part of all echelons of government in Lijiang Prefecture has shown striking results. Last year, reckless cutting and denudation of forests in some forest areas of Lijiang Prefecture was quite serious. With the publication in December of the urgent circular from the State Council and the provincial government, prefectural government offices immediately transmitted it at a meeting of party members in organizations under control of the prefecture. Next, the Public Security Bureau, the Forestry Bureau, and the Industrial and Commercial Administration dispatched persons to organize work teams to go to forest area counties to propagandize and put the circular into effect. Yongsheng County also used street broadcasts and propaganda vehicles to propagandize. Simultaneous with the widespread propaganda and education, provincial administrative offices took decisive action, preparing supplementary regulations on the basis of the local situation. The prefecture lumber company immediately stopped the felling of trees and sales of lumber. All logging farms stopped logging and the transportation of timber, removed loggers, and checked on the status of plans to be carried out, acting on each of them on an individual basis only following completion of checking. Whether within plan or outside plan, all allocations and movements of timber were temporarily halted to await checks, and that which was within plan required a transportation certification issued by the county forestry administration authorities before it could be transported. Beginning on 21 December, all free markets for timber were closed, and 34 timber inspection stations were set up to bolster inspection of the transportation of timber, and to deal at once with all who violated the spirit of the urgent circular. Seven or eight families in the Xintuan Production Brigade of Jinshan Commune in Lijiang County violated the spirit of the "Urgent Circular" by forming a partnership with the Gudoutang Production Team of Jianxin Brigade in Dadong Commune to buy two truckloads of timber. When checked by the inspection station, it was confiscated on the spot. Throughout the prefecture, timber confiscated in accordance with regulations amounted to 698 cubic meters; frozen timber amounted to more than 64,000 cubic meters; and fines amounted to more than 10,400 yuan.

As a result of resolute action and decisive enforcement, all cutting of forests in the prefecture has been halted, whether by state-owned enterprises, collectives, or individuals. Loggers in forest areas and processers of timber have been withdrawn, and the free market in timber has been closed. Allocation and transportation of all timber outside of plan has been temporarily halted. The situation of a multiplicity of dealers in lumber has begun to change to unified purchase, administration, and management by forestry authorities. Now the evil tendency toward reckless logging and denudation of forests has been virtually halted.

9432
CSO: 4007/265

BRIEFS

TOBACCO QUOTAS OVERFULFILLED--As of the end of December 1980, a total of 2,042,300 dan of flue-cured tobacco had been requisition purchased throughout the province, a 7.5 percent overfulfillment of the requisition purchase plan for the entire year. In striving for flue-cured tobacco of superior quality and high output, the tobacco growing areas of Yunnan Province diligently adhered to a program of "fixed acreage, increase in per unit yields, and major efforts to improve quality." Last year, although drought caused a 120,000 mu reduction in tobacco acreage as compared with 1979, thanks to the conscientious implementation of this program, output of flue-cured tobacco increased from 236 jin per mu in 1979 to 265 jin per mu. Quality of flue-cured tobacco was the best it has been during the past several years. Of the tobacco already requisition purchased, 58 percent has been of high and medium quality, a 12 percent increase over 1979. [Text] [Kunming YUNNAN RIBAO in Chinese 3 Feb 81 p 1] 9432

GOOD HOT PEPPER HARVEST--Last year, a bumper hot pepper harvest was reaped from both the collectively grown 3,420 mu and the 3,000 mu grown by commune members in Xiangyun County. Output totaled more than 900,000 jin of which the supply and marketing cooperative has already purchased more than 500,000 jin. This is more than 200,000 jin more than the highest amount ever purchased. Xiangyun County is one of the major pepper producing areas in Yunnan Province. Xiangyun pepper is characterized by bright red color and luster, even size, thick skin, and excellent flavor. It is famed as an excellent seasoning. [Text] [Kunming YUNNAN RIBAO in Chinese 11 Feb 81 p 2] 9432

GRAIN, TOBACCO, RAPE OUTPUT UP--Last year Yiliang County made heartening achievements in 10 increases, 3 decreases, and 1 change. The 10 increases were: an 11 percent increase over the previous year in grain output; a 12.7 percent increase over the previous year in gross income from agriculture for an average 18 yuan per capita increase in income; a 7 percent increase over the previous year in total output of flue-cured tobacco, for a 23 percent increase in income over the previous year; a doubling of [illegible] previous year in surplus public grain for the state and overfulfillment [illegible] purchase quotas for average excess sales of 15 jin per capita; a 31 jin increase over the previous year in the per capita average of consumption grain for commune members; cash distributions averaging 100 yuan per person, a 9 yuan increase over the previous year, a more than 4 million jin increase over the previous year in commune member "small freedom" grain; a 1.61 million yuan increase over the previous year in income from household sideline industries; a 21 percent increase over the previous year in total financial revenues for the country; a 7.2 percent increase over the previous year in total retail sales figures for social commodities; and a 61.6 percent increase over last year in savings by people in cities and the countryside. In terms of the county's total population, savings averaged 30 yuan per capita. The three decreases were: population natural rate of increase decreased from 11.3 per 1000 the previous year to 6.8 per 1000; agricultural costs decreased from the previous year by 2 percent; and dependence on resales of grain by the state decreased by 3.66 million jin over the previous year. The one change was that most of the county's 313 "three dependents team" changed their situation of dependence on state resale of grain to them. The 10 increases, 3 decreases, and one change that took place in this county were won through diligent adherence on the part of all echelons of the party organization throughout the province to the line, the programs, and the policies formulated by the Third Plenary Session of the 11th Party Central Committee, and through the active efforts of the broad masses of cadres and the people. [Text] [Kunming YUNNAN RIBAO in Chinese 5 Feb 81 p 1] 9432

ZHENXIONG GRAIN CROP--Total grain output in 1980 for Zhenxiong County was 310,200,000 jin, a 10 percent increase over the previous year. Hailed as an "advanced learn from Dazhai County" in the past, Zhenxiong County was deeply affected by the ultra-leftist line. Since the Third Plenary Session of the 11th Party Central Committee, the broad masses of cadres have been emancipated from the shackles of leftist ideology, and have diligently carried out the party's various policies. Ninety-nine percent of production teams have established and perfected some form of a system of responsibility for production, broadened small liberties, and set up a system of personal responsibility for cadres, which has aroused the enthusiasm for production of cadres and commune members alike. Meanwhile, out of concern for local proneness to cold waterlogging, spring-sown crops were planted about 10 days ahead of time to avoid cold waterlogging. [Text] [Kunming YUNNAN RIBAO in Chinese 13 Feb 81 p 1] 9432

COMMODITY GRAIN BASE WATER CONSERVANCY EMPHASIZED--Luquan County has given emphasis to commodity grain bases for water conservancy construction as a means of developing economic benefits in larger grain harvests. Last year, Luquan County designated 25 production brigades as the county's commodity grain bases. The amount of grain these brigades annually provide the state amounts to more than 60 percent of the entire province's commodity grain. Not only is transportation in these brigades convenient, climatic conditions good, and per unit grain yields high, but the area of fields receiving inadequate rainfall and land available for reclamation is great with a large potential to be tapped for increased output. In view of this, the County CCP Committee actively readjusted the pattern of water conservancy construction, placing emphasis on commodity grain bases. This year, the county provided for 32 water conservancy construction projects, and all of these projects, with the exception of 11 intended to relieve distress for people and animals in mountain areas needing drinking water, are to be built in commodity grain bases. In investment in water conservancy as well, principal support also went to commodity grain base areas in a total investment of 115,300 yuan representing 60 percent of total county investment in small scale water conservancy construction. They also transferred cadres and technicians to construction units to give concrete support and guidance. Commune member enthusiasm is high. As of 10 January, 19 water conservancy projects in commodity grain bases were underway. [Text] [Kunming YUNNAN RIBAO in Chinese 10 Feb 81 p 2] 9432

WUDING COUNTY GRAIN OUTPUT--Wuding County's grain output last year totaled more than 103.9 million jin for a 17 percent increase over the previous year, and output of economic crops such as flue-cured tobacco and edible oils also increased in varying degrees, the main reasons being county adoption of tailored guidance methods, and the adaptation of general methods to local situations to establish various forms of a system of responsibility for production. Wuding County is peopled by numerous nationalities with national minorities number half the population. The county's topography is complex with some brigades occupying flatlands or river valleys, but most being distributed in mountain regions. As a result, great differences exist between one production team and another in methods of agricultural production, in administration and management, and in levels of distributions. In order to extend the system of responsibility for production by adapting general methods to local situations, the Wuding County CCP began with investigation and study and then adopted the method of tailored guidance to help and to channel production teams in setting up systems of responsibility for production suited to their own circumstances. In concrete methods, as well, such as the "several quotas," the "several guarantees" and the ratio of rewards and penalties in the linking of output to calculation of remuneration while adhering to public ownership of the means of production and distributions in accordance with labor, they also adapted general methods to local situations in formulating that not all brigades would be required to be "like each other." [Text] [Kunming YUNNAN RIBAO in Chinese 13 Feb 81 p 1] 9432

DALI COUNTY BUMPER HARVEST--Dali County had a bumper grain harvest last year. After the county had overfulfilled state requisition purchase quotas totaling 41.2 million jin, county grain units immediately organized forces to go to communes and brigades possessing great amounts of grain, and to the homes of commune members rich with grain to discuss a negotiated price for their grain. They publicized policy on negotiated grain purchases going from team to team to buy grain at negotiated prices, while at the same time making the rounds of markets to buy at negotiated prices grain that had gone to market. After slightly more than a month, the county's seven places in charge of grain had negotiated with production teams for the purchase at negotiated prices of 1.2 million jin of grain, and had bought 600,000 jin at negotiated prices from markets. From Fengyi Commune alone, they purchased 770,000 jin at negotiated prices. Eighty percent of the grain purchased at negotiated prices was paddy rice. [Text] [Kunming YUNNAN RIBAO in Chinese 11 Feb 81 p 1] 9432

HIGHEST GRAIN OUTPUT--Dali Bai Nationality Autonomous Zhou, which has had bumper grain and oil-bearing crop harvests for consecutive years, had a grain and oil-bearing crop output last year that was the highest on record. Grain output increased by 5.8 percent over the previous year as 12 of the 13 counties (or cities) in the zhou had increased output. Output of oil-bearing crops totaled 87.3 percent more than last year. After this zhou smashed the "gang of four," agricultural production rapidly revived its development. In 1978, the zhou's total grain output increased 9 percent over the highest recorded level, and output of oil-bearing crops showed an increase totaling 25.3 percent that of the previous year. Despite 1979's severe natural calamities, thanks to zhou and county CCP committees and government at all levels having unswervingly implemented the various rural policies of the Third Plenary Session of the 11th Party Central Committee, which aroused the socialist enthusiasm of cadres and commune members, total grain output increased another 4.5 percent over the bumper 1978 harvest, and output of oil-bearing crops increased 24.1 percent. Last year, while further implementing rural policies, the zhou adapted general methods to local situations, acted realistically, and readjusted the internal composition of its agriculture. Grain and oil showed another increase in output; diversification also developed; and cash income again increased. Along with the 3 consecutive years of increases in output of grain and oil, the zhou's natural population increase also continued to decline. In 1977, the zhou's natural population increase rate was 23 per 1000. By last year it had fallen to 9.3 per 1000. [Text] [Kunming YUNNAN RIBAO in Chinese 14 Feb 81 p 1] 9432

WIDESPREAD SEASONAL RAINS--As the result of warm, humid southwesterly flow of air from the bay of Bengal, a seasonal rain fell over a wide area of 91 counties (and cities) of Yunnan Province on 10 and 11 February. Moderate to heavy rain fell over a wide area of Honghe Zhou, Yuqi Prefecture, and Simao Prefecture. Yuanjiang County, which received the most rainfall, registered 49 millimeters. Shiping County had 43 millimeters, and Tonghai County and Mojiang County each had 35 millimeters. This provided preliminary relief to the exceptionally parched prefectures of south Yunnan like a good rain after a long drought. This seasonal rainfall was the most widespread one and the one providing the single greatest amount of rain since early last winter, and it was also the first spring rain since Lichun [5 February]. It arrived earlier than in previous years and the amount of rainfall was greater. "Spring rain is as precious as oil," and the falling rain is like falling grain. Right now Yunnan Province's broad areas of winter crops are entering the stage of reproduction and growth. The rape is branching everywhere; the wheat has begun to form spikes, and the broad beans continuously flower and form pods. Two-thirds of the water requirements demand fulfillment during this period, and this seasonal rainfall is very advantageous for the normal growth of winter crops everywhere. [Text] [Kunming YUNNAN RIBAO in Chinese 12 Feb 81 p 1] 9432

CSO: 4007/264

ZHEJIANG

BRIEFS

NINGHAI COUNTY AGRICULTURE--Ninghai County in Zhejiang Province, which is known as "eastern Zhejiang's poor county," has given attention, as part of its readjustment of the internal pattern of agriculture, to making the most of the natural advantages of the local vast mountains and boundless seas, exploiting the mountains and the seas. In rural villages throughout the county has begun to appear a burgeoning of the five industries of agriculture, forestry, livestock raising, sideline industries, and fisheries. This province's output value from diversification as a proportion of total output value from agriculture climbed to 65.8 percent in 1980, and commune member distributions increased to an average of more than 110 yuan per capita. During the past 2 years in Ninghai County, a total of 15,000 mu has been afforested with China fir forests, and 21,000 mu of mao bamboo forests have been restored. Newly developed tea plantations cover 12,000 mu, and newly planted citrus groves cover more than 10,000 mu. In addition, a large quantity of rape has been planted and Chinese tallow trees are being grown as an economic crop. More than half the brigades in the county have established diversified bases of more than 1000 mu for the growing of tea, citrus, silkworm mulberry, and mao bamboo that covers an area totaling more than 200,000 mu. At the same time, outstanding accomplishments have been made in the development of coastal beach resources. The county organized forces for an investigation and reconnaissance of the more than 400,000 mu of beaches at Xiangshangang and Sanmenwan, where it established shellfish hatching bases, principally for oysters. The county has 30,000 mu of beaches suitable for the hatching of oysters, and 16,000 mu of it is currently in use as a hatchery, with an output of 20,000 dan of oysters annually and earnings totaling 800,000 yuan. Ninghai County has begun to see some results in the promotion of steady and continuous development of agricultural production from the realistic development of mountain and ocean resources, and readjustments in the internal proportional relationships of its agriculture. In 1979, this county had increases in its output of grain, edible oils, cotton, sugar, tea, and citrus fruit. Last year Ninghai County sustained severe natural disasters, yet a good harvest was reaped in agriculture after the previous year, which had set overall records that had been the highest ever recorded. [Text] [Beijing RENMIN RIBAO in Chinese 2 Mar 81 p 1] 9432

ZHEJIANG COUNTY HOGS--Jiangshan county, Zhejiang Province, raised 56,000 hogs during the first quarter of this year. [Hangzhou Zhejiang Provincial Service in Mandarin 0400 GMT 12 Apr 81]

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CSO: 4007

Agriculture

AUTHOR: SUN Shancheng [1327 0810 3397]

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TITLE: "Research on *Triticum Agropyron* Form and Species Formation"

SOURCE: Beijing ZUOWU XUEBAO [ACTA AGRONOMICA SINICA] in Chinese No 1, Mar 80 pp 1-10

TEXT OF ENGLISH ABSTRACT: Remote crossings of common wheat and *Agropyron glaucum* have shown enormous form and species formations. From the standpoint of remote crossing of wheat, we have studied the general laws of form and species formation, the stability of the intermediate transitional form and species formation, and how to speed up and control the process of their formation.

After over 20 years of trial and based on our special scheme of crossing, new varieties, forms and sorts of common wheat that are high yielding, immune and have good grains have been originated, as well as the *Triticum*-*Agropyron* octoploid species and the alien addition lines.

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TITLE: "Experiments on the Retaining of Pollen Viability of Soybeans"

SOURCE: Beijing ZUOWU XUEBAO [ACTA AGRONOMICA SINICA] in Chinese No 1, Mar 80 pp 11-16

TEXT OF ENGLISH ABSTRACT: Different methods for retaining the pollen viability of soybeans and the effects of these methods on artificial hybridization were studied. The main results are as follows:
(1) The humidity of the air plays a decisive role in the pollen viability of soybeans. The next important factor is the temperature of the air. In this experiment, the germination of 50 percent of the pollen grains was used as the criterion for usefulness of stored pollen in artificial hybridization. The pollen in the flowers taken in the early morning of the blooming day could be stored at room temperature and humidity until the next day for the spring sowing types of soybean, but only until the evening of the blooming day for the summer sowing types. In a calcium chloride desicator soybean pollen could be stored safely until the

[Continuation of ZUOWU XUEBAO No 1, Mar 80 pp 11-16]

morning of the third day at room temperature; until the 8th day at 8-12°C; and until the 15th day at -3 - -4°C.
(2) When well-developed floral buds of the soybean were cut in the previous evening before blooming, stored under high humidity until midnight of the same day, and then transferred to room humidity, the germination percentage of their pollen was the same as that of the naturally ripened pollen collected on the blooming day. But if the buds were kept in a desicator at room temperature or lower temperature, the germination percentage was reduced to less than 50 percent on the next day after blooming.
(3) The germination percentage of pollen in soybeans may be used as an indication of their usefulness for artificial hybridization. In a calcium chloride desicator at 8-12°C, the pollen grains of stored flowers could be used effectively for artificial hybridization even on the ninth day.

AUTHOR: LI Zebing [2621 3419 3521]

ORG: Huazhong Agricultural College

TITLE: "A Preliminary Discussion on the Classification of Male Sterile Lines of Rice in China"

SOURCE: Beijing ZUOWU XUEBAO [ACTA AGRONOMICA SINICA] in Chinese No 1, Mar 80 pp 17-26

TEXT OF ENGLISH ABSTRACT: More than 30 male sterile lines of rice with different cytoplasmic sources have been developed in China. All of them were of the nucleus-cytoplasm-interacting type developed by the nucleus substitution method.
1. According to the interrelationship between restoration and maintenance, these lines could be classified into three types, i.e., the wild abortive type, the Honglian type and the Tianyi type. The current commercially used hybrid rice types are mainly from the wild abortive type.
2. According to the sources of cytoplasm, the sterile lines could be classified into six groups, i.e., (1) nucleus substitution lines between species; (2) substitution lines between cultivated rice and wild rice, with the nucleus of the former; (3) substitution lines between cultivated rice and wild rice, with the nucleus of the latter; (4) substitution lines of the indica type with nucleus replaced with that of the japonica type; (5) substitution lines of the japonica type with nucleus replaced with that of the indica type; and (6) intraspecific substitution lines between indica and indica or japonica and japonica types comin

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from distant geographical or evolutionary origins. Most of the current male sterile lines of rice come from the second group with only a few coming from the fifth. Some sterile materials were developed from the first and third groups, but no stable sterile lines have been produced yet.
3. The sterile lines could be classified into three groups according to the degree of pollen abortion, i.e., those with uni-nucleate stage abortion, bi-nucleate stage abortion and tri-nucleate stage abortion.
4. The sterile lines could be classified into two groups according to the percentage of fertile pollen of the F_1 generation hybrid. Those of the sporophytic sterile group give 100 percent fertile pollen in the F_1 generation, and male sterile segregates appear only in the F_2 generation. Those of the gametophytic sterile types give 50 percent fertile pollen when crossed with their restoring lines, the seed-setting of their selfed progeny is normal and no male sterile individual appears in the F_2 generation.

AUTHOR: WANG Yuan [3769 6678]

ORG: Institute of Cotton Research, Shaanxi Province

TITLE: "A Few Opinions on the Development of Cotton Cultivars Resistant to *Fusarium* and *Verticillium* Wilts"

SOURCE: Beijing ZUOWU XUEBAO [ACTA AGRONOMICA SINICA] in Chinese No 1, Mar 80 pp 27-34

TEXT OF ENGLISH ABSTRACT: In order to combat the *Fusarium* and *Verticillium* wilts of cotton, a lot of resistant cultivars have been developed successfully by the Institute of Cotton Research, Shaanxi Province. They are Shen 4, Shen 65-141, Shen 401, Shen 416, Shen 112, Shen 3563, Shen 1155, etc.

The development of these cultivars indicates that the resistance to the abovementioned diseases can be combined with good agronomic characteristics, such as high yield and good quality of fibers. In order to accelerate the process for the development of disease resistant cultivars, it was considered very important to pay special attention to the following:
1. There should be a clear-cut breeding objective.
2. A disease nursery ensuring even and heavy infection should be maintained.
3. Special care should be taken in the selection of parents and the making of crosses.

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4. There should be a comparatively larger population to ensure the selection of the best types.
5. The newly developed cultivars should be put into commercial use as soon as possible.

AUTHOR: GUAN Chunyun [1351 2504 0061]

ORG: Department of Agronomy, Hunan Agricultural College

TITLE: "A Preliminary Analysis of the Yield Formation of Rapeseed (B. napus)"

SOURCE: Beijing ZUOWU XUEBAO [ACTA AGRONOMICA SINICA] in Chinese No 1, Mar 80 pp 35-44

TEXT OF ENGLISH ABSTRACT: The process of the yield formation of rapeseed (B. napus) was analyzed on the basis of a series of studies. Of the three yield components of rapeseed, that which has the most influence on the seed yield is the number of siliques per unit area (it was estimated that 10,000 siliques could give approximately 0.5 kg of seeds), whereas the number of seeds per silique and the 1000-seed weight were of comparatively less importance. Therefore, in order to increase the seed yield it was necessary to increase the number of siliques per unit area.

The way to increase the number of siliques per unit area is to increase the number of plants per unit area and the number of siliques per plant. It was indicated by the path coefficient analysis that if the planting density of the rapeseed crop was within the limit of 20,000 plants/mu, the seed yield increased with the increasing of planting density. This was particularly true within the limit of 10,000 plants/mu. (The optimum density of the rapeseed crop in the Changjiang Valley is about 10,000 - 15,000 plants/mu.)

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The way to increase the number of siliques per plant is to increase the number of siliques of the primary branch, i.e., to increase the total number of the main stem, to increase the ratio of formative branches, and to increase the number of available buds before the budding stage.

The way to increase the number of seeds per silique is to increase the number of ovules per silique and the percentage of fertilized ovules so that more zygotes can develop into seeds.

Since the seedling stage (before the budding stage) of rapeseed is a very important period not only for the vegetative growth but also for the differentiation of effective buds, it was suggested that special care be paid to the management of this crop before and during winter (when the crop is planted with an optimum sowing date and density). However, the management of the later stages should not be relaxed if a higher yield is to be obtained.

9717
CSO: 4009/175

AUTHOR: JIA Tingguang [6328 1694 0342]

ORG: Liaoning Provincial Institute of Improvement and Utilization of Land of Wind Blown Sand

TITLE: "Investigation of the Problem of Wind Erosion of Farm Land in Sandy Hills"

SOURCE: Lyuda LIAONING NONGYE KEXUE [LIAONING AGRICULTURAL SCIENCES] in Chinese No 1, 15 Feb 81 pp 5-11

ABSTRACT: Wind blown sand is Eolian sandy soil, which is loose and has no structure, with more than 90 percent of the grains having a diameter of 0.5-0.05 mm. Its parent material is quartz sand. During the monsoon season, the topsoil is often blown away. In 1967, 10 mu of peanut field of Zhanggutai Commune was stripped to its plowsole and a landscape of desertification was plainly visible. The relationship between the wind speed and the condition of wind erosion is studied. Surveys and observations in 1978-80 indicate that because of the wind speed, wind erosion of sandy field occurs easily in the spring. The occurrence of wind erosion is also closely related to farming techniques, however. Unreasonable reclamation of sandy land and improper land preparation also affect wind erosion. For prevention, the paper suggests that the influence of moisture content and volume weight of the soil is very great, and various farming techniques, including protecting natural vegetation should be adopted.

AUTHOR: WANG Shuhua [3769 3219 5478]
DUAN Weisheng [3008 4850 3932]
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ORG: WANG of Chaoyang District Institute of Agricultural Sciences, Liaoning Province; DUAN of Department of Biology, Jilin Teachers' University; WEI of Institute of Crops and Seed Breeding, Liaoning Provincial Academy of Agricultural Sciences

TITLE: "Preliminary Report of Research on Intraspecific Difference in Drought Resistance of Gaoliang"

SOURCE: Lyuda LIAONING NONGYE KEXUE [LIAONING AGRICULTURAL SCIENCES] in Chinese No 1, 15 Feb 81 pp 14-16

ABSTRACT: Gaoliang [grain sorghum] is a highly drought resistant crop, but there have been very few reports on its intraspecific difference in drought resistance. The authors conducted some studies on the subject in 1979 with 517 local breeds supplied by the Breed Resources Office of the Institute of Crops of Liaoning Provincial Academy of Agricultural Sciences. The moisture content of the experimental plot was 8.35 percent and that of the control plot was 13.06 percent. The plots were 3 m^3 each. There was no irrigation; both depended upon natural rainfall. The results indicate that drought resistance is not an isolated property of gaoliang and it must be evaluated from a combination of several characteristics. Gaoliang is a short daylight crop. The southern breeds have longer growth and development period and are more difficult to demonstrate their drought resistance. Moreover, factors of weather and soil conditions also complicate the matter.

AUTHOR: None

ORG: Corn Office, Institute of Seed Breeding, Liaoning Provincial Academy of Agricultural Sciences

TITLE: "Selective Breeding of the Corn Liao-2 Type New Male Sterile Line"

SOURCE: Lyuda LIAONING NONGYE KEXUE [LIAONING AGRICULTURAL SCIENCES] in Chinese No 1, 15 Feb 81 pp 20-22

ABSTRACT: Breeding began in 1971 with treating F_1 of a group of K24-3-2 x T1423 with 60γ ray before spring planting, and 8 stalks were obtained and all appeared to be male sterile. Following crossing and back crossing, in the winter of 1974, the seeds were brought to Hainan Island to cultivate under the short daylight condition there. In 1976, seeds were purified, planted, and examined during blooming time, and sterility was expressed by all. Further breeding and selection through 77 and 78 bred out the new male sterile line of Liao-2 (or L_2). The cytoplasmic expression of L_2 is different from the existing T, M, C, or 26A types and is highly resistant to spot disease. It is relatively easy to find its natural sterile-free and restorer lines. Related cytoplasm-nuclei relationship and its restoring mechanism are to be studied in the future.

This paper was received for publication on 9 Oct 80.

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ORG: All of Plant Disease Teaching and Research Office, Shenyang College of Agriculture

TITLE: "Observation of Tolerance of Liaoning Rice Sheath and Culm Blight Pathogens to Jinggangmycin"

SOURCE: Lyuda LIAONING NONGYE KEXUE [LIAONING AGRICULTURAL SCIENCES] in Chinese No 1, 15 Feb 81 pp 22-24

ABSTRACT: Rice sheath and culm blight is one of the 3 serious diseases of rice, beside blast and white withering and it occurs in all major rice growing areas of Liaoning. At present, Jinggangmycin [an antibiotics for agricultural use] generally produces a more than 90 percent preventive and control effect. For the purpose of understanding the existence of natural Jinggangmycin-resistant strains so as to prevent the phenomenon of decreasing effectiveness after continuous application of the drug, year after year, in 1978-1979, specimens of pathogens collected from major areas of the province were given to the laboratory for isolation and determination. Jinggangmycin-resistant strain was not discovered. Natural strains resistant to similar antibiotics have been found in Japan and other foreign countries, however, and drug-resistance has been proved to be a hereditary characteristic of pests. The authors recommend that Jinggangmycin should be applied no more than every other year.

AUTHOR: YANG Biye [2799 4310 6851]

ORG: Tieling District Institute of Agricultural Sciences

TITLE: "Sunflower Downy Mildew Discovered in Tieling District"

SOURCE: Lyuda LIAONING NONGYE KEXUE [LIAONING AGRICULTURAL SCIENCES] in Chinese No 1, 15 Feb 81 p 25

ABSTRACT: Downy mildew is a serious disease of sunflowers. It is extensively distributed everywhere in the world, but is especially widespread and severe in the USSR and Eastern European countries. In China, it was first reported in 1963 by LIU Tiruo[0491 1912 5387] when it occurred in Moudanjiang District of Heilongjiang Province. In 1980, LI Yu [2621 3768] reported its discovery, consecutively, in Baicheng, Siping, Tonghua, Changcheng, etc. in Jilin Province since 1972. The author and colleagues discovered it in Tieling in the beginning of Jun 80. Microscopic examination identified the pathogen to be Plasmopara halstedii (Farlow) Berl et deToni, a fungus. Symptoms of diseased sunflow, according to preliminary observation of the author, are described. Photos depicting a diseased seedling and a diseased leaf are included.

This paper was received for publication on 18 Sep 80.

6248
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AUTHOR: None

ORG: Shaanxi, Gansu, Sichuan Wheat Stripe Rust Oversummering Observation Group

TITLE: "Oversummering of the Wheat Stripe Rust in The Continuous Region of Shaanxi, Gansu, and Sichuan Provinces"

SOURCE: Tianjin ZHIWU BAOHU [PLANT PROTECTION] in Chinese No 1, 8 Feb 81 pp 6-8

ABSTRACT: In the 50's and early 60's, the high incidence region of wheat stripe rust in China was mainly the winter wheat areas of the Northwest, North, and the portion of Sichuan basin south of Chengdu. After the adoption of such measures as extending rust resistant breeds, there has been no large area stripe rust since 1965 in these areas; but since the 70's it occurred regularly in the area where the 3 provinces of Shaanxi, Gansu, and Sichuan converge and the threat of spreading exists. The group was thus organized in the summer of 1980 to observe the area, form, and quantity of oversummering pathogens for the purpose of finding the possibility of ways of controlling the disease over an extended region. From the observed data, it is tentatively concluded that stripe rust pathogens can oversummer on self-sown wheat seedlings in areas above 1,600-1,700 m, with about 2,200 m as the upper limit. It is further learned that stripe rust cannot oversummer in Ningqiang, Lyueyang, and Guangyuan counties and it can overwinter in parts of Songpan County. The high terrain of Songpan (above 2,300m) is a condition favorable for the pathogens to spread to the surrounding areas. The means by which they spread and the limit of their influence are not yet understood, however.

AUTHOR: LI Wende [2621 2429 1795]
WANG Xiuzhen [3769 4423 3791]

ORG: Both of Zhangjiakou Special School of Agriculture

TITLE: "Interrelations Between Corn Borers and Host Plants"

SOURCE: Tianjin ZHIWU BAOHU [PLANT PROTECTION] in Chinese No 1, 8 Feb 81 pp 10-11

ABSTRACT: In Zhangjiakou, corn borers occur in 2 generations a year. They are widely distributed and very damaging. Thorough treatment of corn stubble in the winter and during late central leaf stage did not bring about obvious tendency of reduction of either generation of borers. The rate of damage to spring corn was about 30-50 percent. In 1977-79, a study was conducted on host plants. Based upon a survey of 20 provinces (cities) of the country, 69 species were found to serve as hosts for corn borers, but 12 of these are hosts for the first generation borers which damage mainly corn, grain sorghum, millet, and hemp. The second generation borers damage 21 crop plants as well as weeds. The number of the second generation is usually larger than that of the first and the difference is reflected mainly by the quantity of weeds in the immediate area. The effect of the availability of overwintering hosts on the quantity of the first generation and the quantity of the hosts of the first generation on the quantity of the second generation borers are also studied.

AUTHOR: None

ORG: Integrated Pest Management Headquarter of Xiangyin County, Hunan Province

TITLE: "Extending Integrated Pest Control to Protect Crops from Pest Damage"

SOURCE: Tianjin ZHIWU BAOHU [PLANT PROTECTION] in Chinese No 1, 8 Feb 81 pp 14-15

ABSTRACT: Xiangyin County is mainly a dual season rice region. Rice pests occurred in gigantic quantities. The number of rice leaf roller and rice leaf hopper increased several folds. Sheath and culm blight occurred in 24.8 percent of the area of the early rice crop and 16 percent of the late rice.. White withering, plant skipper, rice borers, army worm, aphids, and stunting diseases occurred simultaneously or consecutively. Integrated pest control and plant protection measures were adopted. As a result, the yield was 240,000 jin higher than that of 1979, while 30.2 percent less pesticides were applied. The integrated measures include selective use of resistant breeds, protecting and utilizing natural enemies such as spiders, scientific application of chemicals, and strengthened technological leadership. Details of these measures are explained.

AUTHOR: ZHOU Darong [0719 1129 2837]
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ORG: None

TITLE: "A Survey of the Resurgent Outbreak of Wheat Midge, Sitodiplosis Mosslana (Genin) in Wen County of Henan Province"

SOURCE: Tianjin ZHIWU BAOHU [PLANT PROTECTION] in Chinese No 1, 8 Feb 81 pp 16-17

ABSTRACT: Wen County is a wheat high-yield region of Henan Province. In 1956-59, powdered chemical was sprayed every year during the emergence of adult midges. For 4 years in 1970-73, soil treatment with 666 was carried out to control the subterranean pests and the effect was obvious. In 1972, there was a resurgence of midges, however. By 1975, a giant eruption occurred in some wheat fields. An inspection on 24 May found 157 larvae in 10 wheat spikes. There was an average yield reduction of 150 jin from the original 680 jin/mu. A study revealed the fact that as the condition of water and fertilizer improve, the yield increases but the nutritional condition of midges improves also. Furthermore, more midge-sensitive breeds have been widely extended while almost nothing has been done since 1970 to control midges after they emerge from the soil. The paper includes a report of the condition of resurgence of midges in the county and the effects on controlling pupae and emergence of soil treatment with chemicals of different doses in the spring.

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TITLE: "Control of Italian Locusts with Ultra-low Volume Aeroapplication of Phenthoate Ethyl"

SOURCE: Tianjin ZHIWU BAOHU [PLANT PROTECTION] in Chinese No 1, 8 Feb 81 pp 20-21, 25

ABSTRACT: A new aerial and ground surface ultra-low volume (ULV) misting technique has been introduced in the past several years to control Italian locusts (Calliptamus italicus italicus (Linnaeus) and C. barbarus cephalotes (Fischer-Waldheim) over more than 1,000 mu of grassland in Xinjiang, Qinghai, Nei Menggu, and Liaoning provinces. Many chemicals have thus been tested. For example, with an effective dose of 40 g of a mixture of Malathion and DDVP, the rate of kill was less than 80 percent. In 1979, a new agent, Daofengman (Penthoate ethyl) was successfully made although its use for the prevention and control of locusts had not been reported here or abroad. It was used for ULV aerial test over 10,000 mu (in Balikun County of Xinjiang) in effective dosages of 36-41 g/mu. The rate of kill in 48 hours was found to be above 93 percent. The structure of the chemical and the process of applying it are reported.

AUTHOR: None

ORG: Institute of Plant Protection, Chinese Academy of Agricultural Sciences; Hebei Provincial Institute of Plant Protection and Soil and Fertilizer Research; Tangshan District Plant Protection Station, Hebei Province

TITLE: "Prevention and Control of Army Worm With Miyouniao I and II"

SOURCE: Tianjin ZHIWU BAOHU [PLANT PROTECTION] in Chinese No 1, 8 Feb 81 pp 26-27, 32

ABSTRACT: Since 1973, there have been many reports of using phenacyl urea derivatives to control mosquitoes, flies, and farm and forest pests. Of these, Dimilin, Diflubenzuron, TH6040, PH6040 [Miyouniao I] and Miyouniao II (TH6038, PH6038 etc.) are less toxic and safer and useful for many pests that have no natural enemies. In view of the severe problem of army worm of recent years and the fact that the 2nd generation army worm occurs during wheat harvest and such organic chlorine agents as 666 cannot be applied, tests were carried out in 1978-79 on using Miyouniao I and II to control army worms. The effects of different doses of application, the drug residues in the leaves, and the sterilizing effect of the drugs on male and female army worms are observed and reported.

AUTHOR: FU Tiansheng [5543 1131 0524]

ORG: Plant Protection Office, Guangxi Academy of Agricultural Sciences

TITLE: "On the Concept of 'Dominant Species' Among Natural Enemies of Pests"

SOURCE: Tianjin ZHIWU BAOHU [PLANT PROTECTION] in Chinese No 1, 8 Feb 81 pp 35-37

ABSTRACT: Currently, a survey of natural enemies of pests is being carried out in many regions of the country to clarify, primarily, the types and species of natural enemies, the dominant species, etc. for the purpose of providing protection. It is generally believed that the natural enemy having a high rate of parasitism and a larger quantity is the dominant species. The author does not agree with this viewpoint, because (1) The number of species and individuals of natual enemies often increase or decrease with the number of a given pest. For example, late rice crops of Guangxi are often damaged by Pachydiplosis orysae (Wood Mason)even though parasitism of the natural enemy,Platygaster sp. is often above 80 percent. The pest damages rice crops, nevertheless. (2) Whenever a suitable environment exists, high rate of parasitism of natural enemies cannot suppress the growth in number of the pests. For example, the rice leaf roller Cnaphalocrcis medinalis (Guen'ee)is known, according to a survey in Gui County in 1979, to have 28 species of 8 families of natural enemies in insect parasites and 8 species of 3 families of natural enemies in predators, but they cannot,naturally, control the occurrence of that species of leaf rollers. The author's opinion concerning the effective use of natural enemies of pests is detailed.

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